STIC-Biotech/ChemLib 160625

From: Angell, Jon E
Sent: Tuesday, July 26, 2005 7:17 PM
To: STIC-Biotech/ChemLib
Subject: Sequence Database Search Request 09/888,326

SEARCH REQUEST FORM
Scientific and Technical Information Center

Examiner# : 78697
Art Unit : 1635
Phone Number: 571-272-0756
Date: 7/26/05
Serial Number: 09/888,326 (Weiner, G. et al.)
Mailbox & Bldg/Room Location: REMSEN 2C18
Results Format Preferred (circle): Paper

I would like to have a standard and interference search performed using the following SEQ. ID NO. from application : 09/888,326

SEQ ID NO: 729 (nucleic acid ~25 nucleotides long)

Please perform **standard** and **oligomer** search of the commercial and **pending** nucleic acid databases using SEQ ID NO: 729

you can contact me by telephone or email if you have any questions.

Thanks,
Eric

J. Eric Angell
Art Unit 1635
Office: REMSEN 2D20
mailbox: REM 2C18
571-272-0756

****
STAFF USE ONLY

Searcher:_____
Searcher Phone: 2-
Date Searcher Picked up: 8/2/05
Date Completed:_____
Searcher Prep/Rev. Time:___
Online Time:_____

****
Type of Search

NA#: 2 AA#:_____
Interference:____ SPDI:___
S/L:_____ Oligomer:_____
Encode/Transl:_____
Structure#:_____ Text:___
Inventor:____ Litigation:___

****
Vendors and cost where applicable
STN:_____
DIALOG:_____
QUESTEL/ORBIT:_____
LEXIS/NEXIS:_____
SEQUENCE SYSTEM: 91
WWW/Internet:_____
Other(Specify):_____

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 06:17:01 ; Search time 268 Seconds
(without alignments)
530.126 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 4390206 seqs, 2959870667 residues

Word size : 0

Total number of hits satisfying chosen parameters: 8780412

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 45 summaries

Database : N_Geneseq_16Dec04:*
1: geneseqn1980s:*
2: geneseqn1990s:*
3: geneseqn2000s:*
4: geneseqn2001as:*
5: geneseqn2001bs:*
6: geneseqn2002as:*
7: geneseqn2002bs:*
8: geneseqn2003as:*
9: geneseqn2003bs:*
10: geneseqn2003cs:*
11: geneseqn2003ds:*
12: geneseqn2004as:*
13: geneseqn2004bs:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	24	100.0	24	2	AAV60953	Aav60953 Unmethyla
2	24	100.0	24	2	AAV47689	Aav47689 Unmethyla
3	24	100.0	24	2	AAV27664	Aav27664 Immunosti
4	24	100.0	24	2	AAZ41936	Aaz41936 IL-12 sec
5	24	100.0	24	2	AAV83715	Aav83715 Synthetic
6	24	100.0	24	2	AAV74252	Aav74252 CpG-N mot
7	24	100.0	24	3	AAZ61001	Aaz61001 Nucleotid
8	24	100.0	24	3	AAZ48012	Aaz48012 Immune re
9	24	100.0	24	3	AAZ47876	Aaz47876 Immunosti
10	24	100.0	24	3	AAA39265	Aaa39265 CpG immun
11	24	100.0	24	3	AAZ47671	Aaz47671 Parasitic
12	24	100.0	24	3	AAA63588	Aaa63588 Immune st
13	24	100.0	24	3	AAA63586	Aaa63586 Immune st
14	24	100.0	24	3	AAA63598	Aaa63598 Immune st
15	24	100.0	24	3	AAC60280	Aac60280 Immunosti
16	24	100.0	24	3	AAA93700	Aaa93700 Unmethyla
17	24	100.0	24	4	AAC87240	Aac87240 CpG oligo
18	24	100.0	24	4	AAC87232	Aac87232 Immunosti
19	24	100.0	24	4	AAC87231	Aac87231 5'-amidat
20	24	100.0	24	4	AAC87233	Aac87233 Immunosti
21	24	100.0	24	4	AAC87227	Aac87227 Methylate
22	24	100.0	24	4	AAC87234	Aac87234 Digoxigen
23	24	100.0	24	4	AAC87237	Aac87237 5'-amidat
24	24	100.0	24	4	AAC87222	Aac87222 Immunosti
25	24	100.0	24	4	AAH50616	Aah50616 Cytokine
26	24	100.0	24	4	AAF98866	Aaf98866 CpG immun
27	24	100.0	24	4	AAF98732	Aaf98732 Human IFN
28	24	100.0	24	4	AAF98830	Aaf98830 CpG immun
29	24	100.0	24	4	AAF85631	Aaf85631 Vaccine a
30	24	100.0	24	4	AAF59508	Aaf59508 Immunosti
31	24	100.0	24	4	AAF99173	Aaf99173 Immunosti
32	24	100.0	24	4	AAF99146	Aaf99146 Immunosti
33	24	100.0	24	4	AAF99760	Aaf99760 Immunosti
34	24	100.0	24	4	AAF99762	Aaf99762 Immunosti
35	24	100.0	24	4	AAF99135	Aaf99135 Immunosti
36	24	100.0	24	4	AAF99224	Aaf99224 Immunosti
37	24	100.0	24	4	AAF99284	Aaf99284 Immunosti
38	24	100.0	24	4	AAF99759	Aaf99759 Immunosti
39	24	100.0	24	4	AAF99283	Aaf99283 Immunosti
40	24	100.0	24	4	AAF99761	Aaf99761 Immunosti
41	24	100.0	24	4	AAF99119	Aaf99119 Immunosti
42	24	100.0	24	4	AAH44490	Aah44490 CpG adjuv
43	24	100.0	24	5	AAS08982	Aas08982 CpG-conta
44	24	100.0	24	6	ABK48091	Abk48091 CpG oligo
45	24	100.0	24	6	ABS78483	Abs78483 Angiogene

ALIGNMENTS

RESULT 1
AAV60953
ID AAV60953 standard; DNA; 24 BP.
XX
AC AAV60953;
XX
DT 14-DEC-1998 (first entry)
XX
DE Unmethylated cytosine-guanine dinucleotide containing oligonucleotide 4.
XX
KW ss; unmethylated CpG dinucleotide; immune response; natural killer cell;
KW Th2 response; Th1 response; Th1 cytokine; hepatitis B.
XX
OS Synthetic.
XX
PN WO9840100-A1.
XX
PD 17-SEP-1998.
XX
PF 10-MAR-1998; 98WO-US004703.
XX
PR 10-MAR-1997; 97US-0040376P.
XX
PA (OTTA-) OTTAWA CIVIC LOEB RES INST.
PA (QIAG-) QIAGEN GMBH.
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Davis HL, Schorr J, Krieg AM;
XX
DR WPI; 1998-520792/44.
XX
PT Use of oligonucleotides containing an unmethylated CpG dinucleotide -
PT useful as, e.g. adjuvant with antigen, or nucleic acid encoding antigen
PT for inducing immune response in subject.
XX
PS Disclosure; Page 12; 67pp; English.
XX
CC Oligonucleotides containing at least 1 unmethylated CpG dinucleotide
CC affect the immune response in a subject by activating natural killer
CC cells or redirecting a subject's immune response from a Th2 to a Th1
CC response by inducing monocytic and other cells to produce Th1 cytokines.
CC These nucleic acids containing at least 1 unmethylated CpG can be used as
CC an adjuvant, specifically to induce an immune response against an

CC antigenic protein, and are used particularly for virally mediated
CC disorders, e.g. hepatitis B virus infection
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

- SEQ ID NO 6 of WO98/40100

RESULT 2
AAV47689
ID AAV47689 standard; DNA; 24 BP.
XX
AC AAV47689;
XX
DT 20-NOV-1998 (first entry)
XX
DE Unmethylated CpG dinucleotide.
XX
KW Unmethylated CpG dinucleotide; immune response; bacterial meningitis;
KW natural killer cell activation; NK cell; Th2 response; neonatal sepsis;
KW pulmonary disorder; asthma; environmentally induced airway disease;
KW bacterial infection; endotoxaemia; therapy; cystic fibrosis;
KW inflammatory bowel disease; ss.
XX
OS Synthetic.
XX
PN WO9837919-A1.
XX
PD 03-SEP-1998.
XX
PF 25-FEB-1998; 98WO-US003678.
XX
PR 28-FEB-1997; 97US-0039405P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Schwartz DA, Krieg AM;
XX
DR WPI; 1998-480941/41.
XX
PT Use of nucleic acids containing an unmethylated CpG - for treating a
PT subject having or at risk of having an acute decrement in air flow or
PT inhibiting an inflammatory response.
XX
PS Disclosure; Page 13; 65pp; English.
XX
CC This sequence represents an unmethylated CpG dinucleotide, and can be
CC used in the method of the invention. The method is for treating a subject
CC having, or at risk of having an acute decrement in air flow, comprising
CC administering a nucleic acid sequence containing at least one
CC unmethylated CpG. The nucleic acids containing an unmethylated CpG
CC dinucleotide affect an immune response in a subject by activating natural
CC killer cells (NK) or redirecting a subject's immune response from a Th2
CC to a Th1 response by inducing monocytic and other cells to produce Th1
CC cytokines. They can be used to treat pulmonary disorders having an
CC immunologic component, such as asthma or environmentally induced airway
CC disease. They can also be used to treat diseases associated with Gram-
CC positive bacterial infections or endotoxaemia including bacterial
CC meningitis, neonatal sepsis, cystic fibrosis, inflammatory bowel disease
CC and liver cirrhosis, Gram-negative pneumonia, Gram-negative abdominal
CC abscess, haemorrhagic shock, disseminated intravascular coagulation, or
CC an inflammatory response to lipopolysaccharide
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 3
AAV27664
ID AAV27664 standard; DNA; 24 BP.
XX
AC AAV27664;
XX
DT 01-OCT-1998 (first entry)
XX
DE Immunostimulatory oligodeoxyribonucleotide of the invention.
XX
KW Immunostimulatory; oligodeoxyribonucleotide; ODN;
KW unmethylated CpG dinucleotide; activate; lymphocyte; immune response;
KW Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
KW desensitisation therapy; artificial adjuvant; antibody generation; ss.
XX
OS Synthetic.
XX
PN WO9818810-A1.
XX
PD 07-MAY-1998.
XX
PF 30-OCT-1997; 97WO-US019791.
XX
PR 30-OCT-1996; 96US-00738652.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Krieg AM, Kline JN;
XX
DR WPI; 1998-272127/24.
XX
PT New immunostimulatory nucleic acid molecules - which contain at least one
PT unmethylated CpG dinucleotide, used for treating e.g. tumours, infections
PT or autoimmune disease.
XX
PS Claim 29; Page 83; 109pp; English.
XX
CC AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs)
CC of the invention. The ODNs contain at least one unmethylated CpG
CC dinucleotide, and have the formula: 5' N1X1CGX2N2 3', where at least one
CC nucleotide separates consecutive CpGs, X1 is adenine, guanine, or
CC thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26
CC bases with the provision that N1 and N2 does not contain a CCGG tetramer
CC or more than one CCG or CGG trimer OR 5' NX1X2CGX3X4N 3', where at least
CC one nucleotide separates consecutive CpGs, X1 and X2 are selected from
CC GpT, GpG, GpA, ApT and ApA, X3and X4 are selected from TpT or CpT, N is
CC any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2
CC does not contain a CCGG tetramer or more than one CCG or CGG trimer. The
CC ODNs activate lymphocytes in a subject and redirect a subject's immune
CC response from a Th2 to a Th1 (e.g. by inducing monocytic cells and other
CC cells to produce Th1 cytokines, including IL-12, IFN-gamma and GM-CSF).
CC The ODNs can be used to treat or prevent an asthmatic disorder,
CC autoimmune diseases, in desensitisation therapy, as an artificial
CC adjuvant during antibody generation in a mammal such as a mouse or a
CC human
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 4
AAZ41936
ID AAZ41936 standard; DNA; 24 BP.
XX
AC AAZ41936;
XX
DT 24-JAN-2000 (first entry)
XX
DE IL-12 secretion inducing CpG oligonucleotide 81.
XX
KW CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion;
KW human PBMC; immune response; cancer; HIV; bacterial disease; asthma;
KW neoplastic disorder; jaagsiekte; B cell; NK cell; ss; cytokine;
KW antigen presenting cell; infection; allergic disease.
XX
OS Synthetic.
XX
PN WO9951259-A2.
XX
PD 14-OCT-1999.
XX
PF 02-APR-1999; 99WO-US007335.
XX
PR 03-APR-1998; 98US-0080729P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Krieg AM, Weiner G;
XX
DR WPI; 1999-620169/53.
XX
PT Novel synergistic combinations of immunostimulatory oligonucleotides and
PT immunopotentiating cytokines are useful for stimulating the immune
PT system.
XX
PS Example 8; Page 86; 91pp; English.
XX
CC Sequences AAZ41856-Z41949 are phosphorothioate CpG oligonucleotides which
CC are used in the invention to induce interleukin-12 (IL-12) secretion from
CC human PBMC. The invention comprises stimulating an immune response in a
CC subject comprising administering to a subject exposed to an antigen, an
CC immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide
CC to induce a synergistic antigen specific immune response. The methods are
CC useful for treating cancer by stimulating an antigen specific immune
CC response against a cancer antigen. The methods can also be used to treat
CC neoplastic disorders in humans, including but not limited to: sarcoma,
CC carcinoma, fibroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma,
CC and glioma. The methods are also useful for treating infectious diseases,
CC e.g. viral diseases such as HIV, bacterial diseases, and fungal diseases.
CC The methods may also be used to treat allergic diseases, e.g. asthma. The
CC methods and compositions may also be applied to treat cancer and tumours
CC in non human subjects, e.g. cats and dogs. Neoplasias affecting
CC agricultural livestock may also be treated and include leukaemia,
CC haemangiopericytoma and bovine ocular neoplasia. Chronic, infectious,
CC contagious diseases of sheep and goats caused by the bacterium
CC Corynebacterium pseudotuberculosis, and contagious lung tumour of sheep
CC caused by jaagsiekte may also be treated. CpG oligonucleotides can be
CC useful in activating B cells, NK cells, and antigen presenting cells,
CC such as monocytes and macrophages. CpG oligonucleotides enhance antibody
CC dependent cellular cytotoxicity and can be used as an adjuvant in
CC conjunction with tumour antigens to protect against a tumour challenge
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 5
AAV83715
ID AAV83715 standard; DNA; 24 BP.
XX
AC AAV83715;
XX
DT 20-MAR-2003 (revised)
DT 15-MAR-1999 (first entry)
XX
DE Synthetic oligonucleotide with CpG-N motif #3.
XX
KW CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation;
KW viral antigen; bacterial antigen; parasite; therapeutic; growth factor;
KW toxins; tumour suppressor; cytokine; apoptotic protein; interferon;
KW hormone; clotting factor; ligand; receptor; ss.
XX
OS Synthetic.
XX
PN WO9852581-A1.
XX
PD 26-NOV-1998.
XX
PF 20-MAY-1998; 98WO-US010408.
XX
PR 20-MAY-1997; 97US-0047209P.
PR 20-MAY-1997; 97US-0047233P.
XX
PA (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
PA (IOWA) UNIV IOWA RES FOUND.
PA (QIAG-) QIAGEN GMBH.
XX
PI Davis HL, Krieg AM, Schorr J, Wu T;
XX
DR WPI; 1999-059712/05.
XX
PT Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for
PT enhancing the immunostimulatory effect of an antigen or enhancing the
PT expression of a therapeutic polypeptide.
XX
PS Claim 13; Page 86; 109pp; English.
XX
CC This sequence is used in the description of a method for enhancing the
CC immunostimulatory effect of an antigen encoded by nucleic acid contained
CC in a nucleic acid construct. The method involves determining the CpG-N
CC and CpG-S motifs present in the construct, removing neutralising CpG (CpG
CC -N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the
CC construct, thereby producing a nucleic acid construct having enhanced
CC immunostimulatory efficacy. The method can be used for immunisation
CC against viral antigens, e.g. from hepatitis B virus (HBV), bacterial
CC antigens or an antigen derived from a parasite. They can also be used for
CC expression of a therapeutic polypeptide, e.g. growth factors, toxins,
CC tumour suppressors, cytokines, apoptotic proteins, interferons, hormones,
CC clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to
CC correct PA field.)
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 6
AAV74252
ID AAV74252 standard; DNA; 24 BP.
XX
AC AAV74252;
XX

DT 20-MAR-2003 (revised)
DT 15-MAR-1999 (first entry)
XX
DE CpG-N motif SOS-ODN 2022 DNA.
XX
KW CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN;
KW viral antigen; bacterial antigen; parasite; therapeutic; growth factor;
KW toxin; tumour suppressor; cytokine; apoptotic protein; interferon;
KW hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
XX
OS Synthetic.
XX
PN WO9852581-A1.
XX
PD 26-NOV-1998.
XX
PF 20-MAY-1998; 98WO-US010408.
XX
PR 20-MAY-1997; 97US-0047209P.
PR 20-MAY-1997; 97US-0047233P.
XX
PA (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
PA (IOWA) UNIV IOWA RES FOUND.
PA (QIAG-) QIAGEN GMBH.
XX
PI Davis HL, Krieg AM, Schorr J, Wu T;
XX
DR WPI; 1999-059712/05.
XX
PT Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for
PT enhancing the immunostimulatory effect of an antigen or enhancing the
PT expression of a therapeutic polypeptide.
XX
PS Example 1; Page 64; 109pp; English.
XX
CC AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a
CC method for enhancing the immunostimulatory effect of an antigen encoded
CC by nucleic acid contained in a nucleic acid construct. The method
CC involves determining the CpG-N and CpG-S motifs present in the construct,
CC removing neutralising CpG (CpG-N) motifs and optionally inserting
CC stimulatory CpG (CpG-S) motifs in the construct, thereby producing a
CC nucleic acid construct having enhanced immunostimulatory efficacy. The
CC method can be used for immunisation against viral antigens, e.g. from
CC hepatitis B virus (HBV), bacterial antigens or an antigen derived from a
CC parasite. They can also be used for expression of a therapeutic
CC polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines,
CC apoptotic proteins, interferons, hormones, clotting factors, ligands and
CC receptors. (Updated on 20-MAR-2003 to correct PA field.)
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 7
AAZ61001
ID AAZ61001 standard; DNA; 24 BP.
XX
AC AAZ61001;
XX
DT 30-MAY-2000 (first entry)
XX
DE Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
XX
KW Immunostimulatory; stereoisomer; CpG oligonucleotide; Th2; Th1; asthma;
KW allergic reaction; allergen; cancer antigen; cancer; immunoinhibitory;
KW inflammatory disease; inflammatory bowel disease; autoimmune disease;
KW gingivitis; psoriasis; sepsis; ss.
XX
OS Synthetic.
XX
PN WO200006588-A1.
XX
PD 10-FEB-2000.
XX
PF 27-JUL-1999; 99WO-US017100.
XX
PR 27-JUL-1998; 98US-0094370P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Krieg AM;
XX
DR WPI; 2000-195254/17.
XX
PT Immunostimulatory and immunoinhibitory stereoisomers of CpG
PT oligonucleotides useful for immunotherapy of cancer.
XX
PS Disclosure; Page 12; 88pp; English.
XX
CC AAZ60933-Z61015 represent immunostimulatory stereoisomers of CpG
CC oligonucleotides. The sequences are derived from generic nucleic acid
CC sequence, from which immunoinhibitory sequences may also be derived. The
CC immunostimulatory nucleic acids can be co-administered with an antigen to
CC induce an antigen-specific immune response. The immunostimulatory nucleic
CC acids can also be used in methods for redirecting a subject's immune
CC response from a Th2 to a Th1, for treating asthma, for desensitising a
CC subject against the occurrence of an allergic reaction in response to
CC contact with an allergen, for activating an immune cell, especially a
CC lymphocyte or a dendritic cell expressing a cancer antigen or for
CC treating cancer. The immunoinhibitory nucleic acid can be used to prevent
CC an immune response, especially where the immune response in the subject
CC is excessive due to having received an immune stimulating compound. The
CC immunoinhibitory nucleic acid can be used to treat a subject having or at
CC risk of an inflammatory disease, especially inflammatory bowel disease,
CC autoimmune disease, gingivitis, psoriasis and sepsis
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 8
AAZ48012
ID AAZ48012 standard; DNA; 24 BP.
XX
AC AAZ48012;
XX
DT 08-MAR-2000 (first entry)
XX
DE Immune remodeling inducing CpG oligonucleotide SEQ ID NO:90.
XX
KW Haematopoiesis; regulation; CpG oligonucleotide; phosphorothioate;
KW immune remodeling; thrombopoiesis; anaemia; immune system; cancer;
KW immune response; allergic reaction; infectious disease; asthma;
KW thrombocytopaenia; immunohaemolytic disorder; genetic disorder;
KW haemoglobinopathy; kidney failure; chronic inflammatory disorder;
KW rheumatoid arthritis; ss.
XX
OS Synthetic.
XX
PN WO9958118-A2.
XX

PD 18-NOV-1999.
XX
PF 14-MAY-1999; 99WO-IB001285.
XX
PR 14-MAY-1998; 98US-0085516P.
PR 02-FEB-1999; 99US-00241653.
XX
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS GMBH.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Wagner H, Lipford G;
XX
DR WPI; 2000-062261/05.
XX
PT Use of CpG containing oligonucleotides for, e.g. inducing an antigen-
PT specific immune response.
XX
PS Example 1; Page 66; 116pp; English.
XX
CC The present invention describes a method using CpG containing
CC oligonucleotides (ONs) for regulating immune system remodeling and for
CC regulating haematopoiesis. The method for inducing an antigen-specific
CC immune response comprises: (1) administering an ON having a sequence
CC including at least the formula (I); and (2) exposing the subject to an
CC antigen at least 3 days after the ON is administered to the subject to
CC produce an antigen-specific immune response: 5' X1CGX2 3' (I), where the
CC ON = includes at least 8 nucleotides; C and G = unmethylated, and X1 and
CC X2 = nucleotides. The method can be used for inducing an immune response
CC against an antigen such as cells, cell extracts, proteins,
CC polysaccharides, polysaccharide conjugates, lipids, glycolipids,
CC carbohydrate, viral extracts, viruses, bacteria, fungi, parasites and
CC allergens. It can be used in a subject at risk of developing cancer or an
CC allergic reaction. It can also be used for treating an infectious
CC disease, allergic diseases and asthma, as well as thrombocytopaenia which
CC is drug-induced, due to an autoimmune disorder such as idiopathic
CC thrombocytopenic purpura, or resulting from accidental or therapeutic
CC radiation exposure. It can also be used for treating anaemia such as drug
CC -induced anaemia, immunohaemolytic disorder, genetic disorders such as
CC haemoglobinopathy and inherited haemolytic anaemia, inadequate production
CC despite adequate iron stores, chronic disease such as kidney failure, and
CC chronic inflammatory disorder such as rheumatoid arthritis, or anaemia
CC resulting from accidental or therapeutic radiation exposure. AAZ47932 to
CC AAZ48029 represent phosphorothioate CpG oligonucleotides used in the
CC exemplification of the present invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 9
AAZ47876
ID AAZ47876 standard; DNA; 24 BP.
XX
AC AAZ47876;
XX
DT 07-MAR-2000 (first entry)
XX
DE Immunostimulatory oligonucleotide sequence SEQ ID NO:77.
XX
KW Mucosal immunity; immunostimulatory; CpG motif; immune response; antigen;
KW allergic reaction; cancer; infectious disease; asthma; eczema;
KW allergic rhinitis; coryza; hay fever; conjunctivitis; bronchial asthma;
KW urticaria; food allergy; atopic condition; mucosal delivery; ss.
XX
OS Synthetic.
XX
PN WO9961056-A2.
XX
PD 02-DEC-1999.
XX
PF 21-MAY-1999; 99WO-US011359.
XX
PR 22-MAY-1998; 98US-0086393P.
XX
PA (LOEB-) LOEB HEALTH RES INST AT OTTAWA HOSPITAL.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Mccluskie MJ, Davis HL;
XX
DR WPI; 2000-062585/05.
XX
PT Use of CG containing oligonucleotides as adjuvants for inducing an immune
PT response.
XX
PS Disclosure; Page 25; 116pp; English.
XX
CC The present invention describes a method using CpG containing
CC oligonucleotides (ONs) as adjuvants for inducing an immune response. The
CC method for inducing a mucosal immune response (MIR) comprises: (1)
CC administering to a mucosal surface of a subject an ON, having a sequence
CC including at least the formula (I); and (2) exposing the subject to an
CC antigen to induce the MIR, where the antigen is not encoded in a nucleic
CC acid vector: 5'X1X2CGX3X43' (I), where C and G = unmethylated, and X1,
CC X2, X3 and X4 = nucleotides. The method can be used for treating a
CC subject at risk of developing an allergic reaction, cancer or infectious
CC disease. It can be used for treating asthmatic subjects, eczema, allergic
CC rhinitis or coryza, hay fever, conjunctivitis, bronchial asthma,
CC urticaria, food allergies or other atopic conditions. The antigen may be
CC derived from infectious organisms such as infectious bacteria, viruses,
CC parasites or fungi. It can be used in humans or animals, e.g. bovine,
CC equine, feline, swine, aquatic or avian species. The ONs act as potent
CC mucosal adjuvants to induce immune responses at both local and remote
CC sites against an antigen administered to the mucosal tissue. Both
CC systemic and mucosal immunity are induced by mucosal delivery of the ONs.
CC AAZ47808 to AAZ47891 represent examples of immunostimulatory
CC oligonucleotides given in the present invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 10
AAA39265
ID AAA39265 standard; DNA; 24 BP.
XX
AC AAA39265;
XX
DT 08-SEP-2000 (first entry)
XX
DE CpG immunostimulatory oligonucleotide #3.
XX
KW CpG; immunostimulatory; adjuvant; vaccine; metal salt; antiviral;
KW antibacterial; antiprotozoal; antimalarial; anti-allergic; anticancer;
KW immune response; infection; allergy; cancer; ss.
XX
OS Unidentified.
XX
PN WO200023105-A2.
XX
PD 27-APR-2000.
XX
PF 08-OCT-1999; 99WO-EP007764.

```
XX
PR   16-OCT-1998;   98GB-00022703.
PR   16-OCT-1998;   98GB-00022709.
PR   16-OCT-1998;   98GB-00022712.
XX
PA   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI   Garcon N;
XX
DR   WPI; 2000-339525/29.
XX
PT   Adjuvant composition comprising immunostimulant, useful for preparing
PT   vaccines, deposited on metal salt particle that contains no antigen,
PT   which is present on separate particles.
XX
PS   Disclosure; Page 6; 37pp; English.
XX
CC   The present invention describes an adjuvant composition (A) comprising an
CC   immunostimulant (I) absorbed on a metallic salt particle (II) that is
CC   practically free of antigen (Ag). Also described are: (1) preparation of
CC   a vaccine by mixing (A) with Ag; (2) vaccine comprising two major
CC   populations of complexes, one comprising (A) and the other Ag adsorbed on
CC   (II); and (3) kit comprising, in separate containers, monophosphoryl
CC   lipid A (MPL) adsorbed on metal salt and Ag adsorbed on metal salt. (A)
CC   has antiviral, antibacterial, antiprotozoal, antimalarial, anti-allergic
CC   and anticancer activities, and can be used to induce a specific immune
CC   response. (A) are used in preparation of vaccines for treatment or
CC   prevention of a wide range of viral, bacterial and protozoal infections,
CC   also allergy and cancers. By adsorbing (I) and Ag on separate particles,
CC   vaccines (including those containing many Ag) can be produced simply by
CC   mixing, rather than by sequential adsorption of many components on to the
CC   same particles (which is time-consuming, expensive and difficult to
CC   control). The components may be tested individually and failure of any
CC   one component does not require rejection of an entire batch of vaccine.
CC   The new vaccines are as effective as those prepared conventionally. The
CC   present sequence represents a CpG immunostimulatory oligonucleotide which
CC   is used in the exemplification of the present invention
XX
SQ   Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.0018;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 11
AAZ47671
ID   AAZ47671 standard; DNA; 24 BP.
XX
AC   AAZ47671;
XX
DT   01-MAR-2000  (first entry)
XX
DE   Parasitic infection preventing exemplary oligonucleotide SEQ ID NO:77.
XX
KW   Immune system; immunostimulatory; parasitic infection; parasite;
KW   CpG oligonucleotide; antigen presenting cell; natural killer cell;
KW   granulocyte; malaria; helminth disease; tick; mite; ss.
XX
OS   Synthetic.
XX
PN   WO9956755-A1.
XX
PD   11-NOV-1999.
XX
PF   06-MAY-1999;   99WO-US009863.
XX
PR   06-MAY-1998;   98US-0084512P.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
PA   (OTTA-) OTTAWA CIVIC LOEB RES INST.
PA   (USNA ) US SEC OF NAVY.
XX
PI   Gramzinski RA,  Krieg AM,  Davis HL,  Hoffman SL;
XX
DR   WPI; 2000-062123/05.
XX
PT   Treating and preventing parasitic infections using CpG oligonucleotides.
XX
PS   Disclosure; Page 21; 74pp; English.
XX
CC   The present invention describes a method for treating and preventing
CC   parasitic infection by administration of unmethylated CpG
CC   oligonucleotides. The CpG oligonucleotides are able to stimulate the
CC   innate immune system via the activation of immune cells, such as antigen
CC   presenting cells, natural killer cells and granulocytes. The CpG
CC   oligonucleotides and the method can be used to treat and prevent
CC   parasitic diseases, such as malaria, helminth diseases, tick and mites in
CC   humans, animals and poultry. The oligonucleotides may be administered in
CC   conjunction with parasiticides or other therapeutic compounds after an
CC   organism has been diagnosed to be infected with parasites. Diseases which
CC   can be treated or prevented include those caused by Plasmodium
CC   falciparum, P. ovale, P. malariae, P. vivax, P. knowlesi, Babesia
CC   microti, B. divergens, Trypanosoma cruzi, T. gambiense, T. rhodesiense,
CC   Schistosoma mansoni, Toxoplasma gondii, Trichinella spiralis, Leishmania
CC   major, L. donovani, L. braziliensis, and L. tropica. The parasite is
CC   especially capable of causing malaria. The present sequence represents a
CC   parasitic infection preventing exemplary oligonucleotide sequence from
CC   the present invention
XX
SQ   Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.0018;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 12
AAA63588
ID   AAA63588 standard; DNA; 24 BP.
XX
AC   AAA63588;
XX
DT   04-DEC-2000  (first entry)
XX
DE   Immune stimulatory nucleic acid stimulating NK cell lytic activity.
XX
KW   Viral core antigen; HBcAg; hapten presentation; immune response;
KW   TH1 immune response; gene therapy; ss.
XX
OS   Unidentified.
XX
PN   WO200046365-A1.
XX
PD   10-AUG-2000.
XX
PF   02-FEB-2000; 2000WO-US002413.
XX
PR   02-FEB-1999;   99US-0118526P.
XX
PA   (UYVI-) UNIV VIRGINIA COMMONWEALTH.
PA   (BIOC-) BIOCACHE PHARM LLC.
XX
PI   Coleman TP,  Peterson DL;
XX
DR   WPI; 2000-532900/48.
XX
PT   A composition useful for inducing an immune response comprises
```

PT nucleocapsid protein monomers, derived from duck hepatitis B virus, which
PT are assembled to form a particle.
XX
PS Claim 7; Page 23; 67pp; English.
XX
CC The present sequence represents an immune stimulatory nucleic acid, which
CC is included in the particles of the invention. The structure of these
CC particles is based in part on duck hepatitis B viral core antigen
CC (HBcAg). The particles are used for hapten presentation so as to elicit
CC an immune response. The particles are formed by assembling recombinant
CC forms of duck HBcAg, and are highly immunmogenic. Native duck HBcAg
CC particles are 32-34 nm particles composed of 240 identical subunit
CC monomers, and are very similar to human HBcAg. However, duck HBcAg is not
CC cross-reactive with human HBcAg. Recombinant forms of duck hepatitis B
CC virus elicit a TH1 (T helper cell) immune response. The duck HBcAg
CC particles are used to elicit an immune response in a patient.
CC Polynucleotides encoding the particles may be used in gene therapy
CC protocols
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 13
AAA63586
ID AAA63586 standard; DNA; 24 BP.
XX
AC AAA63586;
XX
DT 04-DEC-2000 (first entry)
XX
DE Immune stimulatory nucleic acid stimulating cytokine production.
XX
KW Viral core antigen; HBcAg; hapten presentation; immune response;
KW TH1 immune response; gene therapy; ss.
XX
OS Unidentified.
XX
PN WO200046365-A1.
XX
PD 10-AUG-2000.
XX
PF 02-FEB-2000; 2000WO-US002413.
XX
PR 02-FEB-1999; 99US-0118526P.
XX
PA (UYVI-) UNIV VIRGINIA COMMONWEALTH.
PA (BIOC-) BIOCACHE PHARM LLC.
XX
PI Coleman TP, Peterson DL;
XX
DR WPI; 2000-532900/48.
XX
PT A composition useful for inducing an immune response comprises
PT nucleocapsid protein monomers, derived from duck hepatitis B virus, which
PT are assembled to form a particle.
XX
PS Claim 7; Page 22; 67pp; English.
XX
CC The present sequence represents an immune stimulatory nucleic acid, which
CC is included in the particles of the invention. The structure of these
CC particles is based in part on duck hepatitis B viral core antigen
CC (HBcAg). The particles are used for hapten presentation so as to elicit
CC an immune response. The particles are formed by assembling recombinant
CC forms of duck HBcAg, and are highly immunmogenic. Native duck HBcAg
CC particles are 32-34 nm particles composed of 240 identical subunit
CC monomers, and are very similar to human HBcAg. However, duck HBcAg is not
CC cross-reactive with human HBcAg. Recombinant forms of duck hepatitis B
CC virus elicit a TH1 (T helper cell) immune response. The duck HBcAg
CC particles are used to elicit an immune response in a patient.
CC Polynucleotides encoding the particles may be used in gene therapy
CC protocols
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 14
AAA63598
ID AAA63598 standard; DNA; 24 BP.
XX
AC AAA63598;
XX
DT 04-DEC-2000 (first entry)
XX
DE Immune stimulatory nucleic acid stimulating B cell proliferation.
XX
KW Viral core antigen; HBcAg; hapten presentation; immune response;
KW TH1 immune response; gene therapy; ss.
XX
OS Unidentified.
XX
PN WO200046365-A1.
XX
PD 10-AUG-2000.
XX
PF 02-FEB-2000; 2000WO-US002413.
XX
PR 02-FEB-1999; 99US-0118526P.
XX
PA (UYVI-) UNIV VIRGINIA COMMONWEALTH.
PA (BIOC-) BIOCACHE PHARM LLC.
XX
PI Coleman TP, Peterson DL;
XX
DR WPI; 2000-532900/48.
XX
PT A composition useful for inducing an immune response comprises
PT nucleocapsid protein monomers, derived from duck hepatitis B virus, which
PT are assembled to form a particle.
XX
PS Claim 7; Page 23; 67pp; English.
XX
CC The present sequence represents an immune stimulatory nucleic acid, which
CC is included in the particles of the invention. The structure of these
CC particles is based in part on duck hepatitis B viral core antigen
CC (HBcAg). The particles are used for hapten presentation so as to elicit
CC an immune response. The particles are formed by assembling recombinant
CC forms of duck HBcAg, and are highly immunmogenic. Native duck HBcAg
CC particles are 32-34 nm particles composed of 240 identical subunit
CC monomers, and are very similar to human HBcAg. However, duck HBcAg is not
CC cross-reactive with human HBcAg. Recombinant forms of duck hepatitis B
CC virus elicit a TH1 (T helper cell) immune response. The duck HBcAg
CC particles are used to elicit an immune response in a patient.
CC Polynucleotides encoding the particles may be used in gene therapy
CC protocols
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0018;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 15
AAC60280
ID AAC60280 standard; DNA; 24 BP.
XX
AC AAC60280;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunostimulatory oligonucleotide #4.
XX
KW Immunostimulatory; oligonucleotide; cancer; allergy; Alzheimer's disease;
KW atherosclerosis; viral; bacterial; parasitic; infection; ss.
XX
OS Homo sapiens.
XX
PN WO200062800-A2.
XX
PD 26-OCT-2000.
XX
PF 04-APR-2000; 2000WO-EP002920.
XX
PR 19-APR-1999; 99GB-00008885.
PR 29-APR-1999; 99US-00301829.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI Friede M, Garcon N, Hermand P;
XX
DR WPI; 2000-687101/67.
XX
PT Adjuvant composition comprising saponin and immunostimulatory
PT oligonucleotide CpG, useful for producing vaccine formulations for
PT prophylaxis and treatment of cancers, allergy and Alzheimer's disease.
XX
PS Claim 5; Page 5; 52pp; English.
XX
CC The present invention relates to an adjuvant composition comprising a
CC saponin and an immunostimulatory oligonucleotide. A vaccine composition
CC containing the adjuvant is useful for inducing an immune response in an
CC individual and for preventing or treating disease. Diseases include
CC cancers; allergy; Alzheimer's disease and atherosclerosis. The vaccine is
CC also useful for prophylaxis and treatment of viral, bacterial and
CC parasitic infections. The present sequence is an oligonucleotide of the
CC invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match   100.0%; Score 24; DB 3; Length 24;
  Best Local Similarity   100.0%; Pred. No. 0.0018;
  Matches   24; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	24	100.0	24	6	AR146378	AR146378 Sequence
2	24	100.0	24	6	AR154717	AR154717 Sequence
3	24	100.0	24	6	BD205600	BD205600 Method of
4	24	100.0	24	6	BD261142	BD261142 Methods a
5	24	100.0	24	6	BD261298	BD261298 Methods a
6	24	100.0	24	6	BD261563	BD261563 Vaccine.
7	24	100.0	24	6	BD267904	BD267904 Methods f
8	24	100.0	24	6	BD270804	BD270804 Stereoiso
9	24	100.0	24	6	CQ769070	CQ769070 Sequence
10	24	100.0	24	6	CQ788116	CQ788116 Sequence
11	24	100.0	24	6	CQ788202	CQ788202 Sequence
12	24	100.0	24	6	CQ815138	CQ815138 Sequence
13	24	100.0	24	6	CQ875565	CQ875565 Sequence
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15	24	100.0	24	6	AR182894	AR182894 Sequence
16	24	100.0	24	6	AR213877	AR213877 Sequence
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18	24	100.0	24	6	AR222261	AR222261 Sequence
19	24	100.0	24	6	AR303121	AR303121 Sequence
20	24	100.0	24	6	AR432469	AR432469 Sequence
21	24	100.0	24	6	AX040171	AX040171 Sequence
22	24	100.0	24	6	AX045771	AX045771 Sequence
23	24	100.0	24	6	AX045776	AX045776 Sequence
24	24	100.0	24	6	AX045780	AX045780 Sequence
25	24	100.0	24	6	AX045781	AX045781 Sequence
26	24	100.0	24	6	AX045782	AX045782 Sequence
27	24	100.0	24	6	AX045783	AX045783 Sequence
28	24	100.0	24	6	AX045786	AX045786 Sequence
29	24	100.0	24	6	AX045789	AX045789 Sequence
30	24	100.0	24	6	AX104054	AX104054 Sequence
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35	24	100.0	24	6	AX104220	AX104220 Sequence
36	24	100.0	24	6	AX104221	AX104221 Sequence
37	24	100.0	24	6	AX104772	AX104772 Sequence
38	24	100.0	24	6	AX104773	AX104773 Sequence
39	24	100.0	24	6	AX104774	AX104774 Sequence
40	24	100.0	24	6	AX104775	AX104775 Sequence
41	24	100.0	24	6	AX105104	AX105104 Sequence
42	24	100.0	24	6	AX105209	AX105209 Sequence
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44	24	100.0	24	6	AX342289	AX342289 Sequence
45	24	100.0	24	6	AX355701	AX355701 Sequence

ALIGNMENTS

RESULT 1
AR146378
LOCUS AR146378 24 bp DNA linear PAT 08-AUG-2001
DEFINITION Sequence 90 from patent US 6218371.
ACCESSION AR146378
VERSION AR146378.1 GI:15109567
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 24)
AUTHORS Krieg,A.M. and Weiner,G.
TITLE Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines
JOURNAL Patent: US 6218371-A 90 17-APR-2001;
FEATURES Location/Qualifiers
source 1. .24
/organism="unknown"
/mol_type="unassigned DNA"
ORIGIN

Query Match 100.0%; Score 24; DB 6; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.00066;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 2
AR154717
LOCUS AR154717 24 bp DNA linear PAT 08-AUG-2001
DEFINITION Sequence 46 from patent US 6239116.
ACCESSION AR154717
VERSION AR154717.1 GI:15122770
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 24)
AUTHORS Krieg,A.M. and Kline,J.N.

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  TITLE     Immunostimulatory nucleic acid molecules
  JOURNAL   Patent: US 6239116-A 46 29-MAY-2001;
FEATURES             Location/Qualifiers
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ORIGIN

  Query Match             100.0%;  Score 24;  DB 6;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.00066;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 3
BD205600
LOCUS       BD205600                  24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Method of controlling hematopoiesis by using CpG oligonucleotide.
ACCESSION   BD205600
VERSION     BD205600.1  GI:33015370
KEYWORDS    JP 2002514397-A/90.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Wagner,H. and Lipford,G.
  TITLE     Method of controlling hematopoiesis by using CpG oligonucleotide
  JOURNAL   Patent: JP 2002514397-A 90 21-MAY-2002;
            CORY PHARMACEUTICALS GMBH,CORY PHARMACEUTICALS GROUP INC
COMMENT     OS   Artificial Sequence
            PN   JP 2002514397-A/90
            PD   21-MAY-2002
            PF   14-MAY-1999 JP 2000547969
            PR   14-MAY-1998 US    60/085516,02-FEB-1999 US    09/241653 PI
            HERMANN WAGNER,GRAYSON LIPFORD
            PC   C12N15/09,A61K31/70,A61K39/39,C07H21/04//A61K45/00,C12N15/00
            CC   Synthetic Sequence
            FH   Key             Location/Qualifiers
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FEATURES             Location/Qualifiers
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                     /db_xref="taxon:32630"
ORIGIN

  Query Match             100.0%;  Score 24;  DB 6;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.00066;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 4
BD261142
LOCUS       BD261142                  24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Methods and products for stimulating the immune system using
            immunotherapeutic oligonucleotides and cytokines.
ACCESSION   BD261142
VERSION     BD261142.1  GI:33070912
KEYWORDS    JP 2002510644-A/90.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M. and Weiner,G.
  TITLE     Methods and products for stimulating the immune system using
            immunotherapeutic oligonucleotides and cytokines
  JOURNAL   Patent: JP 2002510644-A 90 09-APR-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION
COMMENT     OS   Artificial Sequence
            PN   JP 2002510644-A/90
            PD   09-APR-2002
            PF   02-APR-1999 JP 2000542030
            PR   03-APR-1998 US    60/080729
            PI   ARTHUR M KRIEG,GEORGE WEINER
            PC   A61K38/00,A61K31/7088,A61K39/00,A61P15/00,A61P35/00,A61P37/04,
            PC   A61K37/02
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FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 5
BD261298
LOCUS       BD261298                  24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Methods and products for inducing mucosal immunity.
ACCESSION   BD261298
VERSION     BD261298.1  GI:33071068
KEYWORDS    JP 2002516294-A/77.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Mccluskie,M.J. and Davis,H.L.
  TITLE     Methods and products for inducing mucosal immunity
  JOURNAL   Patent: JP 2002516294-A 77 04-JUN-2002;
            LOEB HEALTH RESEARCH INSTITUTE AT THE OTTAWA HOSPITAL, CORY
            PHARMACEUTICALS GROUP INC
COMMENT     OS   Artificial Sequence
            PN   JP 2002516294-A/77
            PD   04-JUN-2002
            PF   21-MAY-1999 JP 2000550515
            PR   22-MAY-1998 US    60/086393
            PI   MICHAEL J MCCLUSKIE,HEATHER L DAVIS
            PC
            A61K39/00,A61K9/10,A61K9/16,A61K9/50,A61K9/51,A61K31/70,A61K39/ PC
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            FH   Key             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 6
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LOCUS       BD261563                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Vaccine.
ACCESSION   BD261563
VERSION     BD261563.1  GI:33071331
KEYWORDS    JP 2002542203-A/4.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Friede,M., Garcon,N. and Hermand,P.
  TITLE     Vaccine
  JOURNAL   Patent: JP 2002542203-A 4 10-DEC-2002;
            SMITHKLINE BEECHAM BIOLOGICALS SA
COMMENT     OS   Homo sapiens (human)
            PN   JP 2002542203-A/4
            PD   10-DEC-2002
            PF   04-APR-2000 JP 2000611936
            PR   19-APR-1999 GB    9908885.8,29-APR-1999 US    09/301829 PI
            MARTIN FRIEDE,NATHALIE GARCON,PHILIPPE HERMAND PC
            A61K39/39,A61K31/7088,A61K39/00,A61K39/00,A61K39/00,A61K39/02, PC
            A61K39/095,
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            PC   145,A61K39/21,
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 7
BD267904
LOCUS       BD267904                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Methods for the prevention and treatment of parasitic infections
            and related diseases using CPG oligonucleotides.
ACCESSION   BD267904
VERSION     BD267904.1  GI:33077672
KEYWORDS    JP 2002513763-A/77.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Gramzinski,R.A., Krieg,A.M., Davis,H.L. and Hoffman,S.L.
  TITLE     Methods for the prevention and treatment of parasitic infections
            and related diseases using CPG oligonucleotides
  JOURNAL   Patent: JP 2002513763-A 77 14-MAY-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION, OTTAWA CIVIC LOEB RESEARCH
            INSTITUTE, UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY
            OF THE NAVY
COMMENT     OS   Artificial Sequence
            PN   JP 2002513763-A/77
            PD   14-MAY-2002
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            PR   06-MAY-1998 US    60/084512
            PI   ROBERT A GRAMZINSKI,ARTHUR M KRIEG,HEATHER L DAVIS,STEPHEN L
            PI   HOFFMAN
            PC   A61K31/711,A61K9/127,A61K38/00,A61K38/22,A61K45/00,A61P31/00,
            PC   A61P33/00//
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 8
BD270804
LOCUS       BD270804                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Stereoisomer of CpG oligonucleotide and method relating thereto.
ACCESSION   BD270804
VERSION     BD270804.1  GI:33080572
KEYWORDS    JP 2002521489-A/77.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M.
  TITLE     Stereoisomer of CpG oligonucleotide and method relating thereto
  JOURNAL   Patent: JP 2002521489-A 77 16-JUL-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION
COMMENT     OS   Artificial Sequence
            PN   JP 2002521489-A/77
            PD   16-JUL-2002
            PF   27-JUL-1999 JP 2000562385
            PR   27-JUL-1998 US    60/094370
            PI   ARTHUR M KRIEG
            PC   A61K31/711,A61P11/06,A61P17/00,A61P27/02,A61P29/00,A61P31/00,
            PC   A61P31/00,
            PC   A61P35/00,A61P37/04,A61P37/06,A61P37/08
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 9
CQ769070
LOCUS       CQ769070                  24 bp    DNA     linear   PAT 04-MAR-2004
DEFINITION  Sequence 19 from Patent WO2004007743.
ACCESSION   CQ769070
VERSION     CQ769070.1  GI:45112695
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Wagner,H., Kretzschmar,H. and Sethi,S.
  TITLE     Use of cpg nucleic acids in prion-disease
  JOURNAL   Patent: WO 2004007743-A 19 22-JAN-2004;
            Coley Pharmaceutical GmbH (DE)
FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 10
CQ788116
LOCUS       CQ788116                  24 bp    DNA     linear   PAT 24-MAR-2004
DEFINITION  Sequence 47 from Patent WO2004019979.
ACCESSION   CQ788116
VERSION     CQ788116.1  GI:45723024
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Ellis,J.H. and Ashman,C.
  TITLE     Vaccine
  JOURNAL   Patent: WO 2004019979-A 47 11-MAR-2004;
            GLAXO GROUP LIMITED (GB)
FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 11
CQ788202
LOCUS       CQ788202                  24 bp    DNA     linear   PAT 24-MAR-2004
DEFINITION  Sequence 65 from Patent WO2004019974.
ACCESSION   CQ788202
VERSION     CQ788202.1  GI:45723052
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Ashman,C. and Ellis,J.H.
  TITLE     Vaccine
  JOURNAL   Patent: WO 2004019974-A 65 11-MAR-2004;
            GLAXO GROUP LIMITED (GB); GlaxoSmithKline (GB)
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RESULT 12
CQ815138
LOCUS       CQ815138                  24 bp    DNA     linear   PAT 24-MAY-2004
DEFINITION  Sequence 27 from Patent WO2004031222.
ACCESSION   CQ815138
VERSION     CQ815138.1  GI:47604216
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Gough,G.W. and Roberts,C.M.
  TITLE     Vaccine
  JOURNAL   Patent: WO 2004031222-A 27 15-APR-2004;
            GLAXO GROUP LIMITED (GB)
FEATURES             Location/Qualifiers
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ORIGIN

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 13
CQ875565
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DEFINITION  Sequence 1 from Patent WO2004076677.
ACCESSION   CQ875565
VERSION     CQ875565.1  GI:52748523
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Lanzavecchia,A.
  TITLE     Monoclonal antibody production by ebv transformation of b cells
  JOURNAL   Patent: WO 2004076677-A 1 10-SEP-2004;
            Institute for Research in Biomedicine (CH)
FEATURES             Location/Qualifiers
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 14
AR182831
LOCUS       AR182831                 24 bp    DNA     linear   PAT 20-APR-2002
DEFINITION  Sequence 3 from patent US 6339068.
ACCESSION   AR182831
VERSION     AR182831.1  GI:20226038
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M., Davis,H.L., Wu,T. and Schorr,J.
  TITLE     Vectors and methods for immunization or therapeutic protocols
  JOURNAL   Patent: US 6339068-A 3 15-JAN-2002;
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 15
AR182894
LOCUS       AR182894                 24 bp    DNA     linear   PAT 20-APR-2002
DEFINITION  Sequence 66 from patent US 6339068.
ACCESSION   AR182894
VERSION     AR182894.1  GI:20226101
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M., Davis,H.L., Wu,T. and Schorr,J.
  TITLE     Vectors and methods for immunization or therapeutic protocols
  JOURNAL   Patent: US 6339068-A 66 15-JAN-2002;
FEATURES             Location/Qualifiers
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ORIGIN

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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SUMMARIES

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	4	24	100.0	24	3	US-09-082-649B-3	Sequence 3, Appli
	5	24	100.0	24	3	US-09-082-649B-66	Sequence 66, Appl
	6	24	100.0	24	3	US-09-325-193A-77	Sequence 77, Appl
	7	24	100.0	24	3	US-09-191-170-84	Sequence 84, Appl
	8	24	100.0	24	3	US-09-191-170-95	Sequence 95, Appl
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	12	24	100.0	24	4	US-09-965-101-66	Sequence 66, Appl
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	15	23	95.8	23	4	US-09-337-619-123	Sequence 123, App
	16	16	66.7	22	3	US-09-030-701-8	Sequence 8, Appli
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	18	16	66.7	22	3	US-08-960-774-49	Sequence 49, Appl
	19	16	66.7	22	3	US-09-082-649B-67	Sequence 67, Appl
	20	16	66.7	22	3	US-09-325-193A-78	Sequence 78, Appl
	21	16	66.7	22	3	US-09-191-170-85	Sequence 85, Appl
	22	16	66.7	22	4	US-09-337-619-49	Sequence 49, Appl
	23	16	66.7	22	4	US-09-965-101-67	Sequence 67, Appl
	24	16	66.7	3518	4	US-09-270-767-14987	Sequence 14987, A
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c	36	14	58.3	966	4	US-09-302-626B-11	Sequence 11, Appl
c	37	14	58.3	1010	4	US-09-270-767-13450	Sequence 13450, A
c	38	14	58.3	1044	4	US-09-543-681A-2981	Sequence 2981, Ap
	39	14	58.3	2406	4	US-09-710-279-89	Sequence 89, Appl
	40	14	58.3	2409	3	US-09-134-001C-904	Sequence 904, App
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c	42	14	58.3	2962	4	US-09-710-279-3735	Sequence 3735, Ap
c	43	14	58.3	3350	4	US-09-710-279-3659	Sequence 3659, Ap
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ALIGNMENTS

RESULT 1
US-09-030-701-6
; Sequence 6, Application US/09030701B
; Patent No. 6214806
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Schwartz, David A.
; TITLE OF INVENTION: USE OF NUCLEIC ACIDS CONTAINING
; TITLE OF INVENTION: UNMETHYLATED CpG DINUCLEOTIDE IN THE TREATMENT OF
; TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS
; FILE REFERENCE: C1039/7011
; CURRENT APPLICATION NUMBER: US/09/030,701B
; CURRENT FILING DATE: 1998-02-25
; PRIOR APPLICATION NUMBER: 60/039,405
; PRIOR FILING DATE: 1997-02-28
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 6
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
US-09-030-701-6

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.00042;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 2
US-09-286-098-90
; Sequence 90, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Weiner, George
; TITLE OF INVENTION: Methods and Products for Stimulating the
; TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
; TITLE OF INVENTION: Cytokines
; FILE REFERENCE: C1039/7026/HCL
; CURRENT APPLICATION NUMBER: US/09/286,098
; CURRENT FILING DATE: 1999-04-02
; EARLIER APPLICATION NUMBER: US 60/080,729
; EARLIER FILING DATE: 1998-04-03
; NUMBER OF SEQ ID NOS: 105

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;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 90
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-286-098-90

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 3
US-08-960-774-46
; Sequence 46, Application US/08960774
; Patent No. 6239116
;  GENERAL INFORMATION:
;    APPLICANT:  Krieg et al.,
;    TITLE OF INVENTION:  IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
;    NUMBER OF SEQUENCES:  111
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/960,774
;      FILING DATE:  30-October-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  U.S. Serial No. 6239116  08/738,652
;      FILING DATE:  October 30, 1996
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Haile, Lisa A.
;      REGISTRATION NUMBER:  38,347
;      REFERENCE/DOCKET NUMBER:  08918/012001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/678-5070
;      TELEFAX:  619/678-5099
;  INFORMATION FOR SEQ ID NO:  46:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  24 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-960-774-46

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 4
US-09-082-649B-3
; Sequence 3, Application US/09082649B
; Patent No. 6339068
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION:  Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE:  C1039/7009
;  CURRENT APPLICATION NUMBER: US/09/082,649B
;  CURRENT FILING DATE:  1998-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,233
;  PRIOR FILING DATE:  1997-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,209
;  PRIOR FILING DATE:  1997-05-20
;  NUMBER OF SEQ ID NOS:  85
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 3
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: Has a phosphorothioate backbone.
US-09-082-649B-3

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 5
US-09-082-649B-66
; Sequence 66, Application US/09082649B
; Patent No. 6339068
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION:  Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE:  C1039/7009
;  CURRENT APPLICATION NUMBER: US/09/082,649B
;  CURRENT FILING DATE:  1998-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,233
;  PRIOR FILING DATE:  1997-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,209
;  PRIOR FILING DATE:  1997-05-20
;  NUMBER OF SEQ ID NOS:  85
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 66
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: Backbone is a phosphorothioate--phosphodiester
;   OTHER INFORMATION: chimera.
US-09-082-649B-66

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 6
US-09-325-193A-77
; Sequence 77, Application US/09325193A
; Patent No. 6406705
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Krieg, Arthur M.
;  TITLE OF INVENTION:  Use of Nucleic Acids Containing
;  TITLE OF INVENTION:  Unmethylated CpG Dinucleotide as an Adjuvant
;  FILE REFERENCE:  C1039/7025/HCL
;  CURRENT APPLICATION NUMBER: US/09/325,193A
;  CURRENT FILING DATE:  1999-06-03
;  PRIOR APPLICATION NUMBER:  US 09/154,614
;  PRIOR FILING DATE:  1998-09-16
;  PRIOR APPLICATION NUMBER:  PCT/US98/04703
;  PRIOR FILING DATE:  1998-03-10
;  PRIOR APPLICATION NUMBER:  US 60/040,376
;  PRIOR FILING DATE:  1997-03-10
;  NUMBER OF SEQ ID NOS:  98
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 77
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-77

  Query Match           100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity  100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 7
US-09-191-170-84
; Sequence 84, Application US/09191170
; Patent No. 6429199
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Hartmann, Gunther
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  TITLE OF INVENTION: for Activating Dendritic Cells
;  FILE REFERENCE: C1039/7017
;  CURRENT APPLICATION NUMBER: US/09/191,170
;  CURRENT FILING DATE: 1998-11-13
;  EARLIER APPLICATION NUMBER: US 08/960,774
;  EARLIER FILING DATE: 1997-10-30
;  EARLIER APPLICATION NUMBER: US 08/738,652
;  EARLIER FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  NUMBER OF SEQ ID NOS: 99
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 84
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
US-09-191-170-84

  Query Match           100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity  100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 8
US-09-191-170-95
; Sequence 95, Application US/09191170
; Patent No. 6429199
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  APPLICANT: Hartmann, Gunther
;  TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
;  TITLE OF INVENTION: for Activating Dendritic Cells
;  FILE REFERENCE: C1039/7017
;  CURRENT APPLICATION NUMBER: US/09/191,170
;  CURRENT FILING DATE: 1998-11-13
;  EARLIER APPLICATION NUMBER: US 08/960,774
;  EARLIER FILING DATE: 1997-10-30
;  EARLIER APPLICATION NUMBER: US 08/738,652
;  EARLIER FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  NUMBER OF SEQ ID NOS: 99
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 95
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (2)...(2)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (5)...(5)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (13)...(13)
;   OTHER INFORMATION: m5c
;   FEATURE:
;   NAME/KEY: modified_base
;   LOCATION: (21)...(21)
;   OTHER INFORMATION: m5c
US-09-191-170-95

  Query Match           100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity  100.0%;  Pred. No. 0.00042;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 9
US-09-690-921-4
; Sequence 4, Application US/09690921
; Patent No. 6544518
; GENERAL INFORMATION:
;  APPLICANT:  Friede, Martin
;  APPLICANT:  Gerard, Catherine
;  APPLICANT:  Hermand, Philippe
```

; TITLE OF INVENTION: Vaccines
; FILE REFERENCE: B45181-1
; CURRENT APPLICATION NUMBER: US/09/690,921
; CURRENT FILING DATE: 2000-10-18
; PRIOR APPLICATION NUMBER: PCT/EP00/02920
; PRIOR FILING DATE: 2000-04-04
; PRIOR APPLICATION NUMBER: 09/301,829
; PRIOR FILING DATE: 1999-04-29
; PRIOR APPLICATION NUMBER: 9908885.8
; PRIOR FILING DATE: 1999-04-19
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Human
US-09-690-921-4

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.00042;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 10
US-09-337-619-46
; Sequence 46, Application US/09337619
; Patent No. 6653292
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; TITLE OF INVENTION: Methods of Treating Cancer Using
; TITLE OF INVENTION: Immunostimulatory Oligonucleotides
; FILE REFERENCE: C1039/7021/HCL
; CURRENT APPLICATION NUMBER: US/09/337,619
; CURRENT FILING DATE: 1999-06-21
; EARLIER APPLICATION NUMBER: US 08/960,774
; EARLIER FILING DATE: 1997-10-30
; EARLIER APPLICATION NUMBER: US 08/738,652
; EARLIER FILING DATE: 1996-10-30
; EARLIER APPLICATION NUMBER: US 08/386,063
; EARLIER FILING DATE: 1995-02-07
; EARLIER APPLICATION NUMBER: US 08/276,358
; EARLIER FILING DATE: 1994-07-15
; NUMBER OF SEQ ID NOS: 123
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 46
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-337-619-46

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.00042;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 11
US-09-965-101-3
; Sequence 3, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Schorr, Joachim
; APPLICANT: Wu, Tong
; TITLE OF INVENTION: Vectors and Methods for Immunization or
; TITLE OF INVENTION: Therapeutic Protocols
; FILE REFERENCE: C1039/7057 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/965,101
; CURRENT FILING DATE: 2001-09-26
; PRIOR APPLICATION NUMBER: US 09/082,649
; PRIOR FILING DATE: 1998-05-20
; PRIOR APPLICATION NUMBER: US 60/047,233
; PRIOR FILING DATE: 1997-05-20
; PRIOR APPLICATION NUMBER: US 60/047,209
; PRIOR FILING DATE: 1997-05-20
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: Has a phosphorothioate backbone.
US-09-965-101-3

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.00042;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 12
US-09-965-101-66
; Sequence 66, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Schorr, Joachim
; APPLICANT: Wu, Tong
; TITLE OF INVENTION: Vectors and Methods for Immunization or
; TITLE OF INVENTION: Therapeutic Protocols
; FILE REFERENCE: C1039/7057 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/965,101
; CURRENT FILING DATE: 2001-09-26
; PRIOR APPLICATION NUMBER: US 09/082,649
; PRIOR FILING DATE: 1998-05-20
; PRIOR APPLICATION NUMBER: US 60/047,233
; PRIOR FILING DATE: 1997-05-20
; PRIOR APPLICATION NUMBER: US 60/047,209
; PRIOR FILING DATE: 1997-05-20
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 66
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: Backbone is a phosphorothioate--phosphodiester
; OTHER INFORMATION: chimera.
US-09-965-101-66

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.00042;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

```
                  ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 13
US-09-082-649B-15
; Sequence 15, Application US/09082649B
; Patent No. 6339068
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION:  Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE:  C1039/7009
;  CURRENT APPLICATION NUMBER: US/09/082,649B
;  CURRENT FILING DATE:  1998-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,233
;  PRIOR FILING DATE:  1997-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,209
;  PRIOR FILING DATE:  1997-05-20
;  NUMBER OF SEQ ID NOS:  85
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 15
;   LENGTH: 52
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
US-09-082-649B-15

  Query Match             100.0%;  Score 24;  DB 3;  Length 52;
  Best Local Similarity   100.0%;  Pred. No. 0.0004;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          4 TCGTCGTTTTGTCGTTTTGTCGTT 27


RESULT 14
US-09-965-101-15
; Sequence 15, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
;  APPLICANT: Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION: Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE: C1039/7057 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/965,101
;  CURRENT FILING DATE:  2001-09-26
;  PRIOR APPLICATION NUMBER: US 09/082,649
;  PRIOR FILING DATE: 1998-05-20
;  PRIOR APPLICATION NUMBER: US 60/047,233
;  PRIOR FILING DATE: 1997-05-20
;  PRIOR APPLICATION NUMBER: US 60/047,209
;  PRIOR FILING DATE: 1997-05-20
;  NUMBER OF SEQ ID NOS: 84
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 15
;   LENGTH: 52
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
US-09-965-101-15

  Query Match             100.0%;  Score 24;  DB 4;  Length 52;
  Best Local Similarity   100.0%;  Pred. No. 0.0004;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          4 TCGTCGTTTTGTCGTTTTGTCGTT 27


RESULT 15
US-09-337-619-123
; Sequence 123, Application US/09337619
; Patent No. 6653292
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Methods of Treating Cancer Using
;  TITLE OF INVENTION: Immunostimulatory Oligonucleotides
;  FILE REFERENCE: C1039/7021/HCL
;  CURRENT APPLICATION NUMBER: US/09/337,619
;  CURRENT FILING DATE: 1999-06-21
;  EARLIER APPLICATION NUMBER: US 08/960,774
;  EARLIER FILING DATE: 1997-10-30
;  EARLIER APPLICATION NUMBER: US 08/738,652
;  EARLIER FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  NUMBER OF SEQ ID NOS: 123
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 123
;   LENGTH: 23
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-337-619-123

  Query Match             95.8%;  Score 23;  DB 4;  Length 23;
  Best Local Similarity   100.0%;  Pred. No. 0.0014;
  Matches   23;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGT 23
              |||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGT 23


Search completed: August  5, 2005, 13:01:20
Job time : 99 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 12:25:20 ; Search time 412 Seconds
(without alignments)
377.611 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 7297361 seqs, 3241162794 residues

Word size : 0

Total number of hits satisfying chosen parameters: 14594722

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

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10: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
11: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq:*
12: /cgn2_6/ptodata/2/pubpna/US09_NEW_PUB.seq:*
13: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
14: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
15: /cgn2_6/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
16: /cgn2_6/ptodata/2/pubpna/US10D_PUBCOMB.seq:*
17: /cgn2_6/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
18: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
19: /cgn2_6/ptodata/2/pubpna/US10G_PUBCOMB.seq:*
20: /cgn2_6/ptodata/2/pubpna/US10H_PUBCOMB.seq:*
21: /cgn2_6/ptodata/2/pubpna/US10I_PUBCOMB.seq:*
22: /cgn2_6/ptodata/2/pubpna/US10_NEW_PUB.seq:*
23: /cgn2_6/ptodata/2/pubpna/US11A_PUBCOMB.seq:*
24: /cgn2_6/ptodata/2/pubpna/US11_NEW_PUB.seq:*
25: /cgn2_6/ptodata/2/pubpna/US60_NEW_PUB.seq:*
26: /cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	24	100.0	24	9	US-09-760-506-4	Sequence 4, Appli
2	24	100.0	24	9	US-09-768-012-4	Sequence 4, Appli
3	24	100.0	24	9	US-09-824-468-90	Sequence 90, Appl
4	24	100.0	24	9	US-09-800-266A-77	Sequence 77, Appl
5	24	100.0	24	9	US-09-895-007A-77	Sequence 77, Appl
6	24	100.0	24	9	US-09-920-313-77	Sequence 77, Appl
7	24	100.0	24	9	US-09-920-313-147	Sequence 147, App
8	24	100.0	24	10	US-09-927-422A-23	Sequence 23, Appl
9	24	100.0	24	10	US-09-888-326-729	Sequence 729, App
10	24	100.0	24	10	US-09-888-326-730	Sequence 730, App
11	24	100.0	24	10	US-09-888-326-731	Sequence 731, App
12	24	100.0	24	10	US-09-888-326-732	Sequence 732, App
13	24	100.0	24	10	US-09-888-326-733	Sequence 733, App
14	24	100.0	24	10	US-09-931-583-29	Sequence 29, Appl
15	24	100.0	24	10	US-09-931-583-38	Sequence 38, Appl
16	24	100.0	24	10	US-09-931-583-68	Sequence 68, Appl
17	24	100.0	24	10	US-09-927-884-14	Sequence 14, Appl
18	24	100.0	24	10	US-09-776-479-246	Sequence 246, App
19	24	100.0	24	10	US-09-776-479-262	Sequence 262, App
20	24	100.0	24	10	US-09-776-479-273	Sequence 273, App
21	24	100.0	24	10	US-09-776-479-300	Sequence 300, App
22	24	100.0	24	10	US-09-776-479-352	Sequence 352, App
23	24	100.0	24	10	US-09-776-479-412	Sequence 412, App
24	24	100.0	24	10	US-09-776-479-413	Sequence 413, App
25	24	100.0	24	10	US-09-776-479-964	Sequence 964, App
26	24	100.0	24	10	US-09-776-479-965	Sequence 965, App
27	24	100.0	24	10	US-09-776-479-966	Sequence 966, App
28	24	100.0	24	10	US-09-776-479-967	Sequence 967, App
29	24	100.0	24	10	US-09-954-987B-112	Sequence 112, App
30	24	100.0	24	10	US-09-954-987B-128	Sequence 128, App
31	24	100.0	24	11	US-09-776-479-246	Sequence 246, App
32	24	100.0	24	11	US-09-776-479-262	Sequence 262, App
33	24	100.0	24	11	US-09-776-479-273	Sequence 273, App
34	24	100.0	24	11	US-09-776-479-300	Sequence 300, App
35	24	100.0	24	11	US-09-776-479-352	Sequence 352, App
36	24	100.0	24	11	US-09-776-479-412	Sequence 412, App
37	24	100.0	24	11	US-09-776-479-413	Sequence 413, App
38	24	100.0	24	11	US-09-776-479-964	Sequence 964, App
39	24	100.0	24	11	US-09-776-479-965	Sequence 965, App
40	24	100.0	24	11	US-09-776-479-966	Sequence 966, App
41	24	100.0	24	11	US-09-776-479-967	Sequence 967, App
42	24	100.0	24	11	US-09-965-101-3	Sequence 3, Appli
43	24	100.0	24	11	US-09-965-101-66	Sequence 66, Appl
44	24	100.0	24	13	US-10-023-909A-77	Sequence 77, Appl
45	24	100.0	24	13	US-10-074-956-3	Sequence 3, Appli

ALIGNMENTS

RESULT 1
US-09-760-506-4
; Sequence 4, Application US/09760506
; Publication No. US20010034330A1
; GENERAL INFORMATION:
; APPLICANT: Kensil, Charlotte
; TITLE OF INVENTION: Innate Immunity-Stimulating Compositions of CpG and
; TITLE OF INVENTION: Saponin and Methods Thereof
; FILE REFERENCE: 8449-153-999
; CURRENT APPLICATION NUMBER: US/09/760,506
; CURRENT FILING DATE: 2002-01-12
; PRIOR APPLICATION NUMBER: 60/200,853
; PRIOR FILING DATE: 2000-05-01
; PRIOR APPLICATION NUMBER: 60/175,840
; PRIOR FILING DATE: 2000-01-13
; PRIOR APPLICATION NUMBER: 60/128,608
; PRIOR FILING DATE: 1999-04-08
; PRIOR APPLICATION NUMBER: 60/095,913
; PRIOR FILING DATE: 1998-08-10
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Motif
US-09-760-506-4

Query Match 100.0%; Score 24; DB 9; Length 24;

Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 2
US-09-768-012-4
; Sequence 4, Application US/09768012
; Patent No. US20010044416A1
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: McCluskie, Michael J.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for
; TITLE OF INVENTION: Inducing a Th2 Immune Response
; FILE REFERENCE: C1040/7010/HCL/MAT
; CURRENT APPLICATION NUMBER: US/09/768,012
; CURRENT FILING DATE: 2001-01-22
; PRIOR APPLICATION NUMBER: US 60/177,461
; PRIOR FILING DATE: 2000-01-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
; NAME/KEY: modified_base
; LOCATION: (2)...(2)
; OTHER INFORMATION: Cytosine is unmethylated.
; NAME/KEY: modified_base
; LOCATION: (5)...(5)
; OTHER INFORMATION: Cytosine is unmethylated.
; NAME/KEY: modified_base
; LOCATION: (13)...(13)
; OTHER INFORMATION: Cytosine is unmethylated.
; NAME/KEY: modified_base
; LOCATION: (21)...(21)
; OTHER INFORMATION: Cytosine is unmethylated.
US-09-768-012-4

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 3
US-09-824-468-90
; Sequence 90, Application US/09824468
; Patent No. US20020064515A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Weiner, George
; TITLE OF INVENTION: Methods and Products for Stimulating the
; TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
; TITLE OF INVENTION: Cytokines
; FILE REFERENCE: C1039/7026/HCL
; CURRENT APPLICATION NUMBER: US/09/824,468
; CURRENT FILING DATE: 2001-04-02
; PRIOR APPLICATION NUMBER: 09/286,098
; PRIOR FILING DATE: 1999-04-02
; NUMBER OF SEQ ID NOS: 105
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 90
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-824-468-90

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 4
US-09-800-266A-77
; Sequence 77, Application US/09800266A
; Patent No. US20020156033A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids and
; TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
; TITLE OF INVENTION: Cancer
; FILE REFERENCE: C1037/7017(HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/800,266A
; CURRENT FILING DATE: 2001-03-05
; PRIOR APPLICATION NUMBER: US 60/187,214
; PRIOR FILING DATE: 2000-03-03
; NUMBER OF SEQ ID NOS: 146
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-800-266A-77

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 5
US-09-895-007A-77
; Sequence 77, Application US/09895007A
; Patent No. US20020165178A1
; GENERAL INFORMATION:
; APPLICANT: Schetter, Christian
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACIDS FOR THE
; TITLE OF INVENTION: TREATMENT OF ANEMIA, THROMBOCYTOPENIA, AND NEUTROPENIA
; FILE REFERENCE: C1041/7014 (AWS)
; CURRENT APPLICATION NUMBER: US/09/895,007A
; CURRENT FILING DATE: 2001-06-28
; PRIOR APPLICATION NUMBER: US 60/214,368
; PRIOR FILING DATE: 2000-06-28
; NUMBER OF SEQ ID NOS: 133
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-09-895-007A-77

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 6
US-09-920-313-77
; Sequence 77, Application US/09920313
; Publication No. US20020198165A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Nucleic Acids for the Prevention and
; TITLE OF INVENTION: Treatment of Gastric Ulcers
; FILE REFERENCE: C1037/7019 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/920,313
; CURRENT FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 60/222,248
; PRIOR FILING DATE: 2001-08-08
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-920-313-77

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 7
US-09-920-313-147
; Sequence 147, Application US/09920313
; Publication No. US20020198165A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Nucleic Acids for the Prevention and
; TITLE OF INVENTION: Treatment of Gastric Ulcers
; FILE REFERENCE: C1037/7019 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/920,313
; CURRENT FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 60/222,248
; PRIOR FILING DATE: 2001-08-08
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 147
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic
US-09-920-313-147

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 8
US-09-927-422A-23
; Sequence 23, Application US/09927422A
; Publication No. US20030022852A1
; GENERAL INFORMATION:
; APPLICANT: Van Nest, Gary
; APPLICANT: Tuck, Stephen
; APPLICANT: Fearon, Karen L.
; APPLICANT: Dina, Dino
; TITLE OF INVENTION: BIODEGRADABLE IMMUNOMODULATORY
; TITLE OF INVENTION: FORMULATIONS AND METHODS FOR USE THEREOF
; FILE REFERENCE: 377882001420
; CURRENT APPLICATION NUMBER: US/09/927,422A
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/802,359
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: U.S. 60/188,30
; PRIOR FILING DATE: 2000-03-10
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 23
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Polynucleotide containing CG
US-09-927-422A-23

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 9
US-09-888-326-729
; Sequence 729, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 729
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphorothioate backbone
US-09-888-326-729

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.0019;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

```
RESULT 10
US-09-888-326-730
; Sequence 730, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
;  APPLICANT: Weiner, George
;  APPLICANT:  Hartmann, Gunther
;  TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
;  TITLE OF INVENTION:  Cell Lysis and Treating Cancer
;  FILE REFERENCE: C1039/7052 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/888,326
;  CURRENT FILING DATE:  2001-06-22
;  PRIOR APPLICATION NUMBER: US 60/213,346
;  PRIOR FILING DATE: 2000-06-22
;  NUMBER OF SEQ ID NOS: 848
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 730
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: chimeric phosphorothioate/phosphodiester backbone
;   OTHER INFORMATION: with phosphorothioate at 5' and 3' ends
US-09-888-326-730

  Query Match             100.0%;  Score 24;  DB 10;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.0019;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 11
US-09-888-326-731
; Sequence 731, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
;  APPLICANT: Weiner, George
;  APPLICANT:  Hartmann, Gunther
;  TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
;  TITLE OF INVENTION:  Cell Lysis and Treating Cancer
;  FILE REFERENCE: C1039/7052 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/888,326
;  CURRENT FILING DATE:  2001-06-22
;  PRIOR APPLICATION NUMBER: US 60/213,346
;  PRIOR FILING DATE: 2000-06-22
;  NUMBER OF SEQ ID NOS: 848
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 731
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: phosphodiester backbone
US-09-888-326-731

  Query Match             100.0%;  Score 24;  DB 10;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.0019;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

```
RESULT 12
US-09-888-326-732
; Sequence 732, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
;  APPLICANT: Weiner, George
;  APPLICANT:  Hartmann, Gunther
;  TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
;  TITLE OF INVENTION:  Cell Lysis and Treating Cancer
;  FILE REFERENCE: C1039/7052 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/888,326
;  CURRENT FILING DATE:  2001-06-22
;  PRIOR APPLICATION NUMBER: US 60/213,346
;  PRIOR FILING DATE: 2000-06-22
;  NUMBER OF SEQ ID NOS: 848
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 732
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: phosphorodithioate backbone
US-09-888-326-732

  Query Match             100.0%;  Score 24;  DB 10;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.0019;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 13
US-09-888-326-733
; Sequence 733, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
;  APPLICANT: Weiner, George
;  APPLICANT:  Hartmann, Gunther
;  TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
;  TITLE OF INVENTION:  Cell Lysis and Treating Cancer
;  FILE REFERENCE: C1039/7052 (AWS)
;  CURRENT APPLICATION NUMBER: US/09/888,326
;  CURRENT FILING DATE:  2001-06-22
;  PRIOR APPLICATION NUMBER: US 60/213,346
;  PRIOR FILING DATE: 2000-06-22
;  NUMBER OF SEQ ID NOS: 848
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 733
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: phosphodiester backbone
;   NAME/KEY: misc_feature
;   LOCATION: (24)...(24)
;   OTHER INFORMATION: biotinylated at 3' end
US-09-888-326-733

  Query Match             100.0%;  Score 24;  DB 10;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.0019;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

```
                    ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 14
US-09-931-583-29
; Sequence 29, Application US/09931583
; Publication No. US20030050263A1
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur
;  APPLICANT:  Klinman, Dennis
;  APPLICANT:  Steinberg, Alfred
;  TITLE OF INVENTION: Methods and Products for Treating HIV Infection
;  FILE REFERENCE: C1039/7053(HCL)
;  CURRENT APPLICATION NUMBER: US/09/931,583
;  CURRENT FILING DATE:  2001-08-16
;  PRIOR APPLICATION NUMBER: US 08/276,358
;  PRIOR FILING DATE: 1994-07-15
;  PRIOR APPLICATION NUMBER: US 09/415,142
;  PRIOR FILING DATE: 1999-10-09
;  NUMBER OF SEQ ID NOS: 75
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 29
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   NAME/KEY: misc_feature
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-931-583-29

  Query Match           100.0%;  Score 24;  DB 10;  Length 24;
  Best Local Similarity  100.0%;  Pred. No. 0.0019;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 15
US-09-931-583-38
; Sequence 38, Application US/09931583
; Publication No. US20030050263A1
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur
;  APPLICANT:  Klinman, Dennis
;  APPLICANT:  Steinberg, Alfred
;  TITLE OF INVENTION: Methods and Products for Treating HIV Infection
;  FILE REFERENCE: C1039/7053(HCL)
;  CURRENT APPLICATION NUMBER: US/09/931,583
;  CURRENT FILING DATE:  2001-08-16
;  PRIOR APPLICATION NUMBER: US 08/276,358
;  PRIOR FILING DATE: 1994-07-15
;  PRIOR APPLICATION NUMBER: US 09/415,142
;  PRIOR FILING DATE: 1999-10-09
;  NUMBER OF SEQ ID NOS: 75
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 38
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   NAME/KEY: misc_feature
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-931-583-38

  Query Match           100.0%;  Score 24;  DB 10;  Length 24;
  Best Local Similarity  100.0%;  Pred. No. 0.0019;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


Search completed: August  5, 2005, 18:49:09
Job time : 413 secs
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OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 07:13:21 ; Search time 2060 Seconds
(without alignments)
443.467 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 34239544 seqs, 19032134700 residues

Word size : 0

Total number of hits satisfying chosen parameters: 68479088

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 45 summaries

Database : EST:*
1: gb_est1:*
2: gb_est2:*
3: gb_htc:*
4: gb_est3:*
5: gb_est4:*
6: gb_est5:*
7: gb_est6:*
8: gb_gss1:*
9: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
c	1	20	83.3	936	2	BF142544	BF142544 601789246
c	2	18	75.0	442	7	CN959113	CN959113 6613_1001
c	3	18	75.0	494	8	AZ950586	AZ950586 2M0214P12
	4	18	75.0	613	8	AZ199737	AZ199737 SP_1040_A
	5	18	75.0	627	8	AZ360406	AZ360406 1M0103G09
c	6	18	75.0	712	8	BH965008	BH965008 odj25f11.
c	7	18	75.0	1536	4	BG295964	BG295964 602395212
c	8	18	75.0	1811	2	BF101046	BF101046 601754608
c	9	18	75.0	2238	2	BF185539	BF185539 601814636
c	10	17	70.8	226	5	BX618180	BX618180 BX618180
c	11	17	70.8	606	5	BX615885	BX615885 BX615885
c	12	17	70.8	642	2	BE565899	BE565899 601338744
c	13	17	70.8	705	5	BU475840	BU475840 603469578
c	14	17	70.8	708	4	BJ709296	BJ709296 BJ709296
c	15	17	70.8	711	9	CG083967	CG083967 PUJAE78TB
c	16	17	70.8	728	8	BZ966939	BZ966939 PUGGM74TB
c	17	17	70.8	757	5	BX621653	BX621653 BX621653
	18	17	70.8	775	4	BJ720764	BJ720764 BJ720764
c	19	17	70.8	790	4	BG036541	BG036541 602326310
	20	17	70.8	829	8	BZ966944	BZ966944 PUGGM74TD
c	21	17	70.8	926	8	BZ826661	BZ826661 PUGBV54TB
	22	17	70.8	967	8	BZ826664	BZ826664 PUGBV54TD
	23	17	70.8	1132	4	BM415087	BM415087 OP20158 M
	24	17	70.8	1223	4	BM415076	BM415076 OP20146 M
	25	17	70.8	1492	9	AG287122	AG287122 Mus muscu
	26	16	66.7	158	1	AA540627	AA540627 LD20377.5
	27	16	66.7	218	8	CC080086	CC080086 CSU-K33r.
	28	16	66.7	244	1	AI454980	AI454980 LD01861.5
	29	16	66.7	250	1	AI454956	AI454956 LD01231.5
	30	16	66.7	255	4	BI172903	BI172903 RE15604.5
	31	16	66.7	255	4	BI484157	BI484157 RE67215.5
	32	16	66.7	264	4	BI582498	BI582498 RH20719.5
	33	16	66.7	298	9	AL760984	AL760984 Arabidops
	34	16	66.7	303	7	CO196204	CO196204 EK001923.
	35	16	66.7	309	4	BI240201	BI240201 RE36894.5
	36	16	66.7	310	6	CA954526	CA954526 kl44b08.y
	37	16	66.7	319	9	AG215202	AG215202 Drosophil
	38	16	66.7	328	4	BI243775	BI243775 RE41506.5
c	39	16	66.7	333	4	BI451903	BI451903 GI01_E04
	40	16	66.7	339	6	CA850429	CA850429 kl28c03.y
	41	16	66.7	355	1	AI061956	AI061956 LD35063.5
	42	16	66.7	365	5	BU088287	BU088287 Na_L3_33D
	43	16	66.7	368	7	CO188372	CO188372 EK039421.
	44	16	66.7	376	1	AA201636	AA201636 LD04702.5
c	45	16	66.7	378	4	BM027274	BM027274 GIT000060

ALIGNMENTS

RESULT 1
BF142544/c
LOCUS BF142544 936 bp mRNA linear EST 24-OCT-2000
DEFINITION 601789246F1 NCI_CGAP_Lu30 Mus musculus cDNA clone IMAGE:4020226 5', mRNA sequence.
ACCESSION BF142544
VERSION BF142544.1 GI:10981584
KEYWORDS EST.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE 1 (bases 1 to 936)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by:Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9273 row: k column: 11
High quality sequence stop: 608.
FEATURES Location/Qualifiers
source 1. .936
/organism="Mus musculus"
/mol_type="mRNA"
/strain="CZECH II"
/db_xref="taxon:10090"
/clone="IMAGE:4020226"
/tissue_type="tumor, metastatic to mammary"
/lab_host="DH10B"
/clone_lib="NCI_CGAP_Lu30"
/note="Organ: lung; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; transgenic model WNT-1, expression driven by MMTV-LTR enhancer; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"
ORIGIN

Query Match 83.3%; Score 20; DB 2; Length 936;
Best Local Similarity 100.0%; Pred. No. 0.06;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          3 GTCGTTTTGTCGTTTTGTCG 22
              ||||||||||||||||||||
Db        900 GTCGTTTTGTCGTTTTGTCG 881


RESULT 2
CN959113/c
LOCUS       CN959113                442 bp    mRNA    linear   EST 08-JUN-2004
DEFINITION  6613_100130_12 Fundulus Heteroclitus Liver Fundulus heteroclitus
            cDNA, mRNA sequence.
ACCESSION   CN959113
VERSION     CN959113.1  GI:48440702
KEYWORDS    EST.
SOURCE      Fundulus heteroclitus (killifish)
  ORGANISM  Fundulus heteroclitus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
            Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;
            Cyprinodontiformes; Fundulidae; Fundulus.
REFERENCE   1  (bases 1 to 442)
  AUTHORS   Crawford,D.L., Oleksiak,M.F., Kolell,K.J., Paschall,J., VanWye,J.,
            Roach,J.L. and Whitehead,J.A.
  TITLE     Fundulus Functional Genomics: EST Database for Teleost Fish
  JOURNAL   Unpublished (2004)
COMMENT     Contact: Crawford, Douglas L.
            Marine Genomics - Crawford Lab
            Rosenstiel School of Marine and Atmospheric Science - University of
            Miami
            4600 Rickenbacker Causeway, Miami, FL 33149-1098 USA
            Tel: 305 361 4121
            Email: dcrawford@rsmas.Miami.edu
            Database Web Interface
            http://genomics.rsmas.miami.edu/funnybase/super_craw3/
            Plate: 100130  row: E  column: 2.
FEATURES             Location/Qualifiers
     source          1. .442
                     /organism="Fundulus heteroclitus"
                     /mol_type="mRNA"
                     /db_xref="taxon:8078"
                     /tissue_type="Liver"
                     /clone_lib="Fundulus Heteroclitus Liver"
                     /note="Organ: Liver"
ORIGIN

  Query Match             75.0%;  Score 18;  DB 7;  Length 442;
  Best Local Similarity   100.0%;  Pred. No. 1;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 GTCGTTTTGTCGTTTTGT 20
              ||||||||||||||||||
Db        354 GTCGTTTTGTCGTTTTGT 337


RESULT 3
AZ950586/c
LOCUS       AZ950586                494 bp    DNA     linear   GSS 27-APR-2001
DEFINITION  2M0214P12R Mouse 10kb plasmid UUGC2M library Mus musculus genomic
            clone UUGC2M0214P12 R, genomic survey sequence.
ACCESSION   AZ950586
VERSION     AZ950586.1  GI:13821813
KEYWORDS    GSS.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 494)
  AUTHORS   Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C.,
            Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T.,
            Reilly,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von
            Niederhausern,A. and Wright,D.,Weiss,R.
  TITLE     Mouse whole genome scaffolding with paired end reads from 10kb
            plasmid inserts
  JOURNAL   Unpublished (2000)
COMMENT     Contact: Robert B. Weiss
            University of Utah Genome Center
            University of Utah
            Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
            84112, USA
            Tel: 801 585 5606
            Fax: 801 585 7177
            Email: ddunn@genetics.utah.edu
            Insert Length: 10000   Std Error: 0.00
            Plate: 0214  row: P  column: 12
            Seq primer: CACACAGGAAACAGCTATGACC
            Class: plasmid ends
            High quality sequence stop: 494.
FEATURES             Location/Qualifiers
     source          1. .494
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /strain="C57BL/6J"
                     /db_xref="taxon:10090"
                     /clone="UUGC2M0214P12"
                     /sex="Female"
                     /lab_host="E. coli strain XL10-Gold, T1-resistant, F-"
                     /clone_lib="Mouse 10kb plasmid UUGC2M library"
                     /note="Vector: PWD42nv; Purified genomic DNA from M.
                     musculus C57BL/6J (female) was obtained  from the Jackson
                     Laboratory Mouse DNA Resource
                     (http://www.jax.org/resources/documents/dnares/). The DNA
                     was hydrodynamically sheared by repeated passage through a
                     0.005 inch orifice at constant velocity. The sheared DNA
                     was blunt end-repaired with T4 DNA polymerase and T4
                     polynucleotide kinase. Adaptor oligonucleotides were
                     ligated to the blunt ends in high  molar excess. The
                     adaptored DNA was purified and size-selected for a 9.5 to
                     10.5 kb range using preparative agarose gel
                     electrophoresis. Vector DNA was prepared from a derivative
                     of pWD42 (gi|4732114|gb|AF129072.1), a copy-number
                     inducible derivative of plasmid R1. The vector was ligated
                     with adaptors complementary to the insert adaptors and
                     purified. The sheared, adaptored mouse DNA was annealed to
                     adaptored vector DNA, and transformed into
                     chemically-competent E. coli XL10-Gold (Stratagene) cells
                     and selected for ampicillin resistance."
ORIGIN

  Query Match             75.0%;  Score 18;  DB 8;  Length 494;
  Best Local Similarity   100.0%;  Pred. No. 1;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CGTTTTGTCGTTTTGTCG 22
              ||||||||||||||||||
Db        463 CGTTTTGTCGTTTTGTCG 446


RESULT 4
AZ199737
LOCUS       AZ199737                613 bp    DNA     linear   GSS 31-AUG-2000
DEFINITION  SP_1040_A2_C02_T7A Strongylocentrotus purpuratus, purple sea
            urchin, sperm genomic BAC library Strongylocentrotus purpuratus
            genomic clone Plate=1040 Col=4 Row=E, genomic survey sequence.
ACCESSION   AZ199737
VERSION     AZ199737.1  GI:8394637
KEYWORDS    GSS.
SOURCE      Strongylocentrotus purpuratus
  ORGANISM  Strongylocentrotus purpuratus
            Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
            Echinoidea; Euechinoidea; Echinacea; Echinoida;
            Strongylocentrotidae; Strongylocentrotus.
REFERENCE   1  (bases 1 to 613)
  AUTHORS   Cameron,R.A., Mahairas,G., Rast,J.P., Martinez,P., Biondi,T.R.,
            Swartzell,S., Wallace,J.C., Poustka,A.J., Livingston,B.T.,
            Wray,G.A., Ettensohn,C.A., Lehrach,H., Britten,R.J, Davidson,E.H.
            and Hood,L.
```

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  TITLE     A sea urchin genome project: Sequence scan, virtual map, and
            additional resources
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (17), 9514-9518 (2000)
  MEDLINE   20402566
   PUBMED   10920195
COMMENT     Contact: Cameron, RA, Davidson, EH, Hood, L
            Division of Biology 156-29
            California Institute of Technology
            Pasadena California 91125, USA
            Tel: (626) 395-8421
            Fax: (626) 793-3047
            Email: acameron@caltech.edu
            Plate: 1040  row: E  column: 4
            Seq primer: T7
            Class: BAC ends
            High quality sequence stop: 613.
FEATURES             Location/Qualifiers
     source          1. .613
                     /organism="Strongylocentrotus purpuratus"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:7668"
                     /clone="Plate=1040 Col=4 Row=E"
                     /clone_lib="Strongylocentrotus purpuratus, purple sea
                     urchin, sperm genomic BAC library"
                     /note="Organ: sperm; Vector: BACe3.6; BAC Clones in E-Coli
                     DH10B"
ORIGIN

  Query Match             75.0%;  Score 18;  DB 8;  Length 613;
  Best Local Similarity   100.0%;  Pred. No. 1;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 TTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||
Db        591 TTTTGTCGTTTTGTCGTT 608


RESULT 5
AZ360406
LOCUS       AZ360406                 627 bp    DNA     linear   GSS 02-OCT-2000
DEFINITION  1M0103G09R Mouse 10kb plasmid UUGC1M library Mus musculus genomic
            clone UUGC1M0103G09 R, genomic survey sequence.
ACCESSION   AZ360406
VERSION     AZ360406.1  GI:10474106
KEYWORDS    GSS.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 627)
  AUTHORS   Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C.,
            Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T.,
            Reilly,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von
            Niederhausern,A. and Wright,D.,Weiss,R.
  TITLE     Mouse whole genome scaffolding with paired end reads from 10kb
            plasmid inserts
  JOURNAL   Unpublished (2000)
COMMENT     Contact: Robert B. Weiss
            University of Utah Genome Center
            University of Utah
            Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
            84112, USA
            Tel: 801 585 5606
            Fax: 801 585 7177
            Email: ddunn@genetics.utah.edu
            Insert Length: 10000   Std Error: 0.00
            Plate: 0103  row: G  column: 09
            Seq primer: CACACAGGAAACAGCTATGACC
            Class: plasmid ends
            High quality sequence stop: 627.
FEATURES             Location/Qualifiers
     source          1. .627
                     /organism="Mus musculus"
                     /mol_type="genomic DNA"
                     /strain="C57BL/6J"
                     /db_xref="taxon:10090"
                     /clone="UUGC1M0103G09"
                     /sex="Male"
                     /lab_host="E. Coli strain XL10-Gold, T1-resistant, F-"
                     /clone_lib="Mouse 10kb plasmid UUGC1M library"
                     /note="Vector: PWD42nv; Purified genomic DNA from M.
                     musculus C57BL/6J (male) was obtained  from the Jackson
                     Laboratory Mouse DNA Resource
                     (http://www.jax.org/resources/documents/dnares/). The DNA
                     was hydrodynamically sheared by repeated passage through a
                     0.005 inch orifice at constant velocity. The sheared DNA
                     was blunt end-repaired with T4 DNA polymerase and T4
                     polynucleotide kinase. Adaptor oligonucleotides were
                     ligated to the blunt ends in high  molar excess. The
                     adaptored DNA was purified and size-selected for a 9.5 to
                     10.5 kb range using preparative agarose gel
                     electrophoresis. Vector DNA was prepared from a derivative
                     of pWD42 (gi|4732114|gb|AF129072.1), a copy-number
                     inducible derivative of plasmid R1. The vector was ligated
                     with adaptors complementary to the insert adaptors and
                     purified. The sheared, adaptored mouse DNA was annealed to
                     adaptored vector DNA, and transformed into
                     chemically-competent E. coli XL10-Gold (Stratagene) cells
                     and selected for ampicillin resistance."
ORIGIN

  Query Match             75.0%;  Score 18;  DB 8;  Length 627;
  Best Local Similarity   100.0%;  Pred. No. 1;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CGTTTTGTCGTTTTGTCG 22
              ||||||||||||||||||
Db        326 CGTTTTGTCGTTTTGTCG 343


RESULT 6
BH965008/c
LOCUS       BH965008                 712 bp    DNA     linear   GSS 01-OCT-2002
DEFINITION  odj25f11.b1 B.oleracea002 Brassica oleracea genomic, genomic survey
            sequence.
ACCESSION   BH965008
VERSION     BH965008.1  GI:23446234
KEYWORDS    GSS.
SOURCE      Brassica oleracea
  ORGANISM  Brassica oleracea
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids II; Brassicales; Brassicaceae; Brassica.
REFERENCE   1  (bases 1 to 712)
  AUTHORS   Delehaunty,K., Fewell,G., Fulton,L., McCombie,W.R., Miner,T.,
            Nash,W., Rabinowicz,P.D. and Wilson,R.K.
  TITLE     Whole genome shotgun reads from Brassica oleracea
  JOURNAL   Unpublished (2002)
COMMENT     Contact: Richard K. Wilson
            Genome Sequencing Center
            Washington University School of Medicine
            Email: submissions@watson.wustl.edu
            Plate: odj25  row: f  column: 11
            Seq primer: -21UPpOT forward
            Class: shotgun
            High quality sequence start: 17
            High quality sequence stop: 551.
FEATURES             Location/Qualifiers
     source          1. .712
                     /organism="Brassica oleracea"
                     /mol_type="genomic DNA"
                     /db_xref="taxon:3712"
                     /clone_lib="B.oleracea002"
                     /note="Vector: pOTw13; Whole genome shotgun library from
                     flowering buds. DNA was purified  from a crude nuclear
                     prep using Brassica oleracea TO1000DH3 buds  provided by
```

Thosmas Osborn at the University of Wisconsin. Genomic
DNA was provided by Pablo Rabinowicz (CSHL) and the
shotgun library prepared at Washington University Genome
Sequencing Center."
ORIGIN

Query Match 75.0%; Score 18; DB 8; Length 712;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 18; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 3 GTCGTTTTGTCGTTTTGT 20
||||||||||||||||||
Db 117 GTCGTTTTGTCGTTTTGT 100

RESULT 7
BG295964/c
LOCUS BG295964 1536 bp mRNA linear EST 21-FEB-2001
DEFINITION 602395212F1 NIH_MGC_94 Mus musculus cDNA clone IMAGE:4507034 5',
mRNA sequence.
ACCESSION BG295964
VERSION BG295964.1 GI:13058125
KEYWORDS EST.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE 1 (bases 1 to 1536)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10383 row: g column: 03
High quality sequence stop: 157.
FEATURES Location/Qualifiers
source 1. .1536
/organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
/clone="IMAGE:4507034"
/tissue_type="retina"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_94"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally; oligo-dT primed.
Average insert size 3.3 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
ORIGIN

Query Match 75.0%; Score 18; DB 4; Length 1536;
Best Local Similarity 100.0%; Pred. No. 0.99;
Matches 18; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 6 GTTTTGTCGTTTTGTCGT 23
||||||||||||||||||
Db 1493 GTTTTGTCGTTTTGTCGT 1476

RESULT 8
BF101046/c
LOCUS BF101046 1811 bp mRNA linear EST 19-OCT-2000
DEFINITION 601754608F1 NCI_CGAP_Mam1 Mus musculus cDNA clone IMAGE:3983857 5',
mRNA sequence.
ACCESSION BF101046
VERSION BF101046.1 GI:10883572
KEYWORDS EST.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE 1 (bases 1 to 1811)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9184 row: p column: 02
High quality sequence stop: 514.
FEATURES Location/Qualifiers
source 1. .1811
/organism="Mus musculus"
/mol_type="mRNA"
/strain="FVB/N"
/db_xref="taxon:10090"
/clone="IMAGE:3983857"
/tissue_type="tumor, biopsy sample"
/dev_stage="3 months, virgin"
/lab_host="DH10B"
/clone_lib="NCI_CGAP_Mam1"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI;
Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT.
Library constructed by Life Technologies. Investigator
providing samples: Gilbert Smith, NIH"
ORIGIN

Query Match 75.0%; Score 18; DB 2; Length 1811;
Best Local Similarity 100.0%; Pred. No. 0.98;
Matches 18; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 3 GTCGTTTTGTCGTTTTGT 20
||||||||||||||||||
Db 926 GTCGTTTTGTCGTTTTGT 909

RESULT 9
BF185539/c
LOCUS BF185539 2238 bp mRNA linear EST 31-OCT-2000
DEFINITION 601814636F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4045113 5',
mRNA sequence.
ACCESSION BF185539
VERSION BF185539.1 GI:11064003
KEYWORDS EST.
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 2238)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: CLONETECH Laboratories, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM870 row: h column: 10

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           High quality sequence stop: 1.
FEATURES             Location/Qualifiers
     source          1. .2238
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:4045113"
                     /tissue_type="from acute myelogenous leukemia"
                     /lab_host="DH10B (T1 phage-resistant)"
                     /clone_lib="NIH_MGC_55"
                     /note="Organ: bone marrow; Vector: pDNR-LIB (Clontech);
                     Site_1: SfiI (ggccgcctcggcc); Site_2: SfiI
                     (ggccattatggcc); Double-stranded cDNA was prepared from
                     cell line RNA.  5' and 3' adaptors were used in cloning as
                     follows: 5' adaptor sequence:  5'-CACGGCCATTATGGCC-3' and
                     3' adaptor sequence:
                     5'-ATTCTAGAGGCCGAGGCGGCCGACATG-dT(30)BN-3' (where B = A,
                     C, or G and N = A, C,  G, or T).   Average insert size
                     1.65 kb (range 0.9-4.0 kb).  14/15 colonies contained
                     inserts by PCR. This library was enriched for full-length
                     clones and was constructed by Clontech  Laboratories (Palo
                     Alto, CA)."
ORIGIN

  Query Match             75.0%;  Score 18;  DB 2;  Length 2238;
  Best Local Similarity   100.0%;  Pred. No. 0.98;
  Matches   18;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 TTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||
Db       1435 TTTTGTCGTTTTGTCGTT 1418


RESULT 10
BX618180/c
LOCUS       BX618180                226 bp    mRNA    linear   EST 08-AUG-2003
DEFINITION  BX618180 Normalized Anopheles Head (NAH) Library Anopheles gambiae
            cDNA clone AGAE267TR, mRNA sequence.
ACCESSION   BX618180
VERSION     BX618180.1  GI:33536481
KEYWORDS    EST.
SOURCE      Anopheles gambiae (African malaria mosquito)
  ORGANISM  Anopheles gambiae
            Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
            Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea;
            Anopheles.
REFERENCE   1  (bases 1 to 226)
  AUTHORS   Lobo,N.L., Gardner,M., Romans,P. and Collins,F.H.
  TITLE     Anopheles gambiae EST, Center for Tropical Disease Research and
            Training
  JOURNAL   Unpublished (2003)
COMMENT     Contact: Frank H. Collins
            Center for Tropical Disease Research and Training
            University of Notre Dame
            Notre Dame, IN 46556, USA
            Tel: 574-631-9245
            Fax: 574-631-3996
            Email: frank.h.collins.75@nd.edu.
FEATURES             Location/Qualifiers
     source          1. .226
                     /organism="Anopheles gambiae"
                     /mol_type="mRNA"
                     /db_xref="taxon:7165"
                     /clone="AGAE267TR"
                     /lab_host="E. coli DH10B"
                     /clone_lib="Normalized Anopheles Head (NAH) Library"
                     /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                     polylinker; Site_1: EcoR1 (5'end); Site_2: Not1 (3'end); a
                     directionally cloned and normalized, oligo-T primed cDNA
                     library constructed from strain 4arr adult mosquito heads.
                     Equal numbers of sugar fed males, sugar fed females and 6,
                     24 and 48 hr post blood meal females were used: Bonaldo,
                     Lennon & Soares (1996): Normalization and Subtraction: Two
                     Approaches To Facilitate Gene Discovery, Genome Research
                     6, 791-806. ESTs sequenced from the M13 reverse priming
                     site reading from the 5' ends of the cDNAs are indicated
                     by 'R' in the clone name. ESTs sequenced from the M13
                     forward priming site reading from the 3' ends of the cDNAs
                     are indicated by 'F' in the clone name."
ORIGIN

  Query Match             70.8%;  Score 17;  DB 5;  Length 226;
  Best Local Similarity   100.0%;  Pred. No. 4.1;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          8 TTTGTCGTTTTGTCGTT 24
              |||||||||||||||||
Db        104 TTTGTCGTTTTGTCGTT 88


RESULT 11
BX615885/c
LOCUS       BX615885                606 bp    mRNA    linear   EST 08-AUG-2003
DEFINITION  BX615885 Normalized Anopheles Head (NAH) Library Anopheles gambiae
            cDNA clone AGADB48TR, mRNA sequence.
ACCESSION   BX615885
VERSION     BX615885.1  GI:33531916
KEYWORDS    EST.
SOURCE      Anopheles gambiae (African malaria mosquito)
  ORGANISM  Anopheles gambiae
            Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
            Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea;
            Anopheles.
REFERENCE   1  (bases 1 to 606)
  AUTHORS   Lobo,N.L., Gardner,M., Romans,P. and Collins,F.H.
  TITLE     Anopheles gambiae EST, Center for Tropical Disease Research and
            Training
  JOURNAL   Unpublished (2003)
COMMENT     Contact: Frank H. Collins
            Center for Tropical Disease Research and Training
            University of Notre Dame
            Notre Dame, IN 46556, USA
            Tel: 574-631-9245
            Fax: 574-631-3996
            Email: frank.h.collins.75@nd.edu.
FEATURES             Location/Qualifiers
     source          1. .606
                     /organism="Anopheles gambiae"
                     /mol_type="mRNA"
                     /db_xref="taxon:7165"
                     /clone="AGADB48TR"
                     /lab_host="E. coli DH10B"
                     /clone_lib="Normalized Anopheles Head (NAH) Library"
                     /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                     polylinker; Site_1: EcoR1 (5'end); Site_2: Not1 (3'end); a
                     directionally cloned and normalized, oligo-T primed cDNA
                     library constructed from strain 4arr adult mosquito heads.
                     Equal numbers of sugar fed males, sugar fed females and 6,
                     24 and 48 hr post blood meal females were used: Bonaldo,
                     Lennon & Soares (1996): Normalization and Subtraction: Two
                     Approaches To Facilitate Gene Discovery, Genome Research
                     6, 791-806. ESTs sequenced from the M13 reverse priming
                     site reading from the 5' ends of the cDNAs are indicated
                     by 'R' in the clone name. ESTs sequenced from the M13
                     forward priming site reading from the 3' ends of the cDNAs
                     are indicated by 'F' in the clone name."
ORIGIN

  Query Match             70.8%;  Score 17;  DB 5;  Length 606;
  Best Local Similarity   100.0%;  Pred. No. 4.1;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          8 TTTGTCGTTTTGTCGTT 24
              |||||||||||||||||
Db        112 TTTGTCGTTTTGTCGTT 96
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RESULT 12
BE565899/c
LOCUS       BE565899                642 bp    mRNA    linear   EST 15-AUG-2000
DEFINITION  601338744F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3681059 5',
            mRNA sequence.
ACCESSION   BE565899
VERSION     BE565899.1  GI:9809619
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 642)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: ATCC
             cDNA Library Preparation: CLONTECH Laboratories, Inc.
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
            Plate: LLCM362  row: g  column: 12
            High quality sequence stop: 461.
FEATURES             Location/Qualifiers
     source          1. .642
                     /organism="Homo sapiens"
                     /mol_type="mRNA"
                     /db_xref="taxon:9606"
                     /clone="IMAGE:3681059"
                     /tissue_type="carcinoma, cell line"
                     /lab_host="DH10B (T1 phage-resistant)"
                     /clone_lib="NIH_MGC_53"
                     /note="Organ: bladder; Vector: pDNR-LIB (Clontech);
                     Site_1: SfiI (ggccgcctcggcc); Site_2: SfiI
                     (ggccattatggcc); Double-stranded cDNA was prepared from
                     cell line RNA.  5' and 3' adaptors were used in cloning as
                     follows: 5' adaptor sequence:  5'-CACGGCCATTATGGCC-3' and
                     3' adaptor sequence:
                     5'-ATTCTAGAGGCCGAGGCGGCCGACATG-dT(30)BN-3' (where B = A,
                     C, or G and N = A, C, G, or T).  Average insert size 1.55
                     kb (range 0.9-4.0 kb).  15/15 colonies contained inserts
                     by PCR. This library was enriched for full-length clones
                     and was constructed by Clontech  Laboratories (Palo Alto,
                     CA)."
ORIGIN

  Query Match             70.8%;  Score 17;  DB 2;  Length 642;
  Best Local Similarity   100.0%;  Pred. No. 4.1;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 TTTTGTCGTTTTGTCGT 23
              |||||||||||||||||
Db        632 TTTTGTCGTTTTGTCGT 616


RESULT 13
BU475840/c
LOCUS       BU475840                705 bp    mRNA    linear   EST 30-NOV-2002
DEFINITION  603469578F1 CSEQRBN22 Gallus gallus cDNA clone ChEST343120 5', mRNA
            sequence.
ACCESSION   BU475840
VERSION     BU475840.1  GI:25969417
KEYWORDS    EST.
SOURCE      Gallus gallus (chicken)
  ORGANISM  Gallus gallus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
            Phasianinae; Gallus.
REFERENCE   1  (bases 1 to 705)
  AUTHORS   Boardman,P.E., Sanz-Ezquerro,J., Overton,I.M., Burt,D.W., Bosch,E.,
            Fong,W.T., Tickle,C., Brown,W.R.A., Wilson,S.A. and Hubbard,S.J.
  TITLE     A Comprehensive Collection of Chicken cDNAs
  JOURNAL   Curr. Biol. 12 (22), 1965-1969 (2002)
  MEDLINE   22335534
   PUBMED   12445392
COMMENT     Contact: Simon Hubbard
            Department of Biomolecular Sciences
            University of Manchester Institute of Science and Technology
            (UMIST)
            PO Box 88, Manchester, M60 1QD, UK
            Tel: 01612008930
            Fax: 01612360409
            Email: Simon.Hubbard@umist.ac.uk.
FEATURES             Location/Qualifiers
     source          1. .705
                     /organism="Gallus gallus"
                     /mol_type="mRNA"
                     /strain="Layer and broiler"
                     /db_xref="taxon:9031"
                     /clone="ChEST343120"
                     /sex="Male and female"
                     /tissue_type="Chondrocytes isolated from growth plate
                     cartilage"
                     /dev_stage="adult"
                     /lab_host="DH10B"
                     /clone_lib="CSEQRBN22"
                     /note="Vector: pBluescript II KS(+); Site_1: EcoRI;
                     Site_2: Not1; This normalized library was constructed from
                     1 million independent clones. cDNA synthesis was initiated
                     using an oligo(dT) primer, using methylated C in the first
                     strand synthesis reaction. Following this first strand
                     reaction, double-stranded cDNA was blunted, ligated to
                     NotI adapters, digested with EcoRI, size-selected, and
                     cloned into the NotI and EcoRI compatible sites of a
                     custom modified MCS of the pBluescript (KS+) vector. The
                     library was normalized in 2 rounds using conditions
                     adapted from Soares et al., PNAS (1994) 91: 9228-9232 and
                     Bonaldo et al., Genome Research 6 (1996): 791, except that
                     a significantly longer reannealing hybridization was
                     used."
ORIGIN

  Query Match             70.8%;  Score 17;  DB 5;  Length 705;
  Best Local Similarity   100.0%;  Pred. No. 4;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          8 TTTGTCGTTTTGTCGTT 24
              |||||||||||||||||
Db        592 TTTGTCGTTTTGTCGTT 576


RESULT 14
BJ709296/c
LOCUS       BJ709296                708 bp    mRNA    linear   EST 08-MAR-2004
DEFINITION  BJ709296 MF01FFA cDNA Oryzias latipes cDNA clone MF01FFA008k15 5',
            mRNA sequence.
ACCESSION   BJ709296
VERSION     BJ709296.1  GI:45250221
KEYWORDS    EST.
SOURCE      Oryzias latipes (Japanese medaka)
  ORGANISM  Oryzias latipes
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
            Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;
            Beloniformes; Adrianichthyidae; Oryziinae; Oryzias.
REFERENCE   1  (bases 1 to 708)
  AUTHORS   Kohara,Y., Shin-i,T., Kimura,T., Narita,T., Jindo,T. and Takeda,H.
  TITLE     Medaka EST Project in Takeda's lab
  JOURNAL   Unpublished (2001)
COMMENT     Contact: Tadasu Shin-i
            Center For Genetic Resource Information
            National Institute of Genetics
```

```
            1111 Yata, Mishima, Shizuoka 411-8540, Japan
            Tel: 81-559-81-6856
            Fax: 81-559-81-6855
            Email: tshini@genes.nig.ac.jp.
FEATURES             Location/Qualifiers
     source          1. .708
                     /organism="Oryzias latipes"
                     /mol_type="mRNA"
                     /strain="Hd-rR"
                     /db_xref="taxon:8090"
                     /clone="MF01FFA008k15"
                     /sex="mixture of female and male"
                     /tissue_type="whole embryo"
                     /dev_stage="fry stage 40"
                     /clone_lib="MF01FFA cDNA"
ORIGIN

  Query Match             70.8%;  Score 17;  DB 4;  Length 708;
  Best Local Similarity   100.0%;  Pred. No. 4;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          7 TTTTGTCGTTTTGTCGT 23
              |||||||||||||||||
Db        421 TTTTGTCGTTTTGTCGT 405


RESULT 15
CG083967/c
LOCUS       CG083967                711 bp    DNA     linear   GSS 20-AUG-2003
DEFINITION  PUJAE78TB ZM_0.6_1.0_KB Zea mays genomic clone ZMMBTa0622M11,
            genomic survey sequence.
ACCESSION   CG083967
VERSION     CG083967.1  GI:33966261
KEYWORDS    GSS.
SOURCE      Zea mays
  ORGANISM  Zea mays
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
            clade; Panicoideae; Andropogoneae; Zea.
REFERENCE   1  (bases 1 to 711)
  AUTHORS   Whitelaw,C.A., Quackenbush,J., Van Aken,S., Utterback,T.,
            Resnick,A., Fraser,C.M., Yuan,Y., San Miguel,P., Ma,J. and
            Bennetzen,J.
  TITLE     Maize Genomics Consortium
  JOURNAL   Unpublished (2003)
COMMENT     Contact: Cathy Whitelaw
            TIGR
            9712 Medical Center Drive, Rockville, MD 20850, USA
            Tel: 301-838-5843
            Fax: 301-838-0208
            Email: whitelaw@tigr.org
            Seq primer: TR
            Class: sheared ends.
FEATURES             Location/Qualifiers
     source          1. .711
                     /organism="Zea mays"
                     /mol_type="genomic DNA"
                     /strain="B73"
                     /db_xref="taxon:4577"
                     /clone="ZMMBTa0622M11"
                     /clone_lib="ZM_0.6_1.0_KB"
                     /note="Vector: pCR4-TOPO; Site_1: EcoRI; 0.6-1.0 kb high
                     CoT selected genomic DNA library"
ORIGIN

  Query Match             70.8%;  Score 17;  DB 9;  Length 711;
  Best Local Similarity   100.0%;  Pred. No. 4;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          5 CGTTTTGTCGTTTTGTC 21
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Db        401 CGTTTTGTCGTTTTGTC 385
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Search completed: August  5, 2005, 12:59:42
Job time : 2068 secs
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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 4, 2005, 23:33:10 ; Search time 1554 Seconds
(without alignments)
748.343 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 4708233 seqs, 24227607955 residues

Total number of hits satisfying chosen parameters: 9416466

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:*
5: gb_ov:*
6: gb_pat:*
7: gb_ph:*
8: gb_pl:*
9: gb_pr:*
10: gb_ro:*
11: gb_sts:*
12: gb_sy:*
13: gb_un:*
14: gb_vi:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	24	100.0	24	6	AR146378	AR146378 Sequence
2	24	100.0	24	6	AR154717	AR154717 Sequence
3	24	100.0	24	6	BD205600	BD205600 Method of
4	24	100.0	24	6	BD261142	BD261142 Methods a
5	24	100.0	24	6	BD261298	BD261298 Methods a
6	24	100.0	24	6	BD261563	BD261563 Vaccine.
7	24	100.0	24	6	BD267904	BD267904 Methods f
8	24	100.0	24	6	BD270804	BD270804 Stereoiso
9	24	100.0	24	6	CQ769070	CQ769070 Sequence
10	24	100.0	24	6	CQ788116	CQ788116 Sequence
11	24	100.0	24	6	CQ788202	CQ788202 Sequence
12	24	100.0	24	6	CQ815138	CQ815138 Sequence
13	24	100.0	24	6	CQ875565	CQ875565 Sequence
14	24	100.0	24	6	AR182831	AR182831 Sequence
15	24	100.0	24	6	AR182894	AR182894 Sequence
16	24	100.0	24	6	AR213877	AR213877 Sequence
17	24	100.0	24	6	AR222250	AR222250 Sequence
18	24	100.0	24	6	AR222261	AR222261 Sequence
19	24	100.0	24	6	AR303121	AR303121 Sequence
20	24	100.0	24	6	AR432469	AR432469 Sequence
21	24	100.0	24	6	AX040171	AX040171 Sequence
22	24	100.0	24	6	AX045771	AX045771 Sequence
23	24	100.0	24	6	AX045776	AX045776 Sequence
24	24	100.0	24	6	AX045780	AX045780 Sequence
25	24	100.0	24	6	AX045781	AX045781 Sequence
26	24	100.0	24	6	AX045782	AX045782 Sequence
27	24	100.0	24	6	AX045783	AX045783 Sequence
28	24	100.0	24	6	AX045786	AX045786 Sequence
29	24	100.0	24	6	AX045789	AX045789 Sequence
30	24	100.0	24	6	AX104054	AX104054 Sequence
31	24	100.0	24	6	AX104070	AX104070 Sequence
32	24	100.0	24	6	AX104081	AX104081 Sequence
33	24	100.0	24	6	AX104108	AX104108 Sequence
34	24	100.0	24	6	AX104160	AX104160 Sequence
35	24	100.0	24	6	AX104220	AX104220 Sequence
36	24	100.0	24	6	AX104221	AX104221 Sequence
37	24	100.0	24	6	AX104772	AX104772 Sequence
38	24	100.0	24	6	AX104773	AX104773 Sequence
39	24	100.0	24	6	AX104774	AX104774 Sequence
40	24	100.0	24	6	AX104775	AX104775 Sequence
41	24	100.0	24	6	AX105104	AX105104 Sequence
42	24	100.0	24	6	AX105209	AX105209 Sequence
43	24	100.0	24	6	AX105248	AX105248 Sequence
44	24	100.0	24	6	AX342289	AX342289 Sequence
45	24	100.0	24	6	AX355701	AX355701 Sequence

ALIGNMENTS

RESULT 1
AR146378
LOCUS AR146378 24 bp DNA linear PAT 08-AUG-2001
DEFINITION Sequence 90 from patent US 6218371.
ACCESSION AR146378
VERSION AR146378.1 GI:15109567
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 24)
AUTHORS Krieg,A.M. and Weiner,G.
TITLE Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines
JOURNAL Patent: US 6218371-A 90 17-APR-2001;
FEATURES Location/Qualifiers
source 1. .24
/organism="unknown"
/mol_type="unassigned DNA"
ORIGIN

Query Match 100.0%; Score 24; DB 6; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.3;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 2
AR154717
LOCUS AR154717 24 bp DNA linear PAT 08-AUG-2001
DEFINITION Sequence 46 from patent US 6239116.
ACCESSION AR154717
VERSION AR154717.1 GI:15122770
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
Unclassified.
REFERENCE 1 (bases 1 to 24)
AUTHORS Krieg,A.M. and Kline,J.N.

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  TITLE     Immunostimulatory nucleic acid molecules
  JOURNAL   Patent: US 6239116-A 46 29-MAY-2001;
FEATURES             Location/Qualifiers
     source          1. .24
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match             100.0%;  Score 24;  DB 6;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 2.3;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 3
BD205600
LOCUS       BD205600                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Method of controlling hematopoiesis by using CpG oligonucleotide.
ACCESSION   BD205600
VERSION     BD205600.1  GI:33015370
KEYWORDS    JP 2002514397-A/90.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Wagner,H. and Lipford,G.
  TITLE     Method of controlling hematopoiesis by using CpG oligonucleotide
  JOURNAL   Patent: JP 2002514397-A 90 21-MAY-2002;
            CORY PHARMACEUTICALS GMBH,CORY PHARMACEUTICALS GROUP INC
COMMENT     OS   Artificial Sequence
            PN   JP 2002514397-A/90
            PD   21-MAY-2002
            PF   14-MAY-1999 JP 2000547969
            PR   14-MAY-1998 US    60/085516,02-FEB-1999 US    09/241653 PI
            HERMANN WAGNER,GRAYSON LIPFORD
            PC   C12N15/09,A61K31/70,A61K39/39,C07H21/04//A61K45/00,C12N15/00
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FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 4
BD261142
LOCUS       BD261142                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Methods and products for stimulating the immune system using
            immunotherapeutic oligonucleotides and cytokines.
ACCESSION   BD261142
VERSION     BD261142.1  GI:33070912
KEYWORDS    JP 2002510644-A/90.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M. and Weiner,G.
  TITLE     Methods and products for stimulating the immune system using
            immunotherapeutic oligonucleotides and cytokines
  JOURNAL   Patent: JP 2002510644-A 90 09-APR-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION
COMMENT     OS   Artificial Sequence
            PN   JP 2002510644-A/90
            PD   09-APR-2002
            PF   02-APR-1999 JP 2000542030
            PR   03-APR-1998 US    60/080729
            PI   ARTHUR M KRIEG,GEORGE WEINER
            PC   A61K38/00,A61K31/7088,A61K39/00,A61P15/00,A61P35/00,A61P37/04,
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            CC   Synthetic Sequence
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FEATURES             Location/Qualifiers
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ORIGIN

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 5
BD261298
LOCUS       BD261298                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Methods and products for inducing mucosal immunity.
ACCESSION   BD261298
VERSION     BD261298.1  GI:33071068
KEYWORDS    JP 2002516294-A/77.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Mccluskie,M.J. and Davis,H.L.
  TITLE     Methods and products for inducing mucosal immunity
  JOURNAL   Patent: JP 2002516294-A 77 04-JUN-2002;
            LOEB HEALTH RESEARCH INSTITUTE AT THE OTTAWA HOSPITAL, CORY
            PHARMACEUTICALS GROUP INC
COMMENT     OS   Artificial Sequence
            PN   JP 2002516294-A/77
            PD   04-JUN-2002
            PF   21-MAY-1999 JP 2000550515
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            PI   MICHAEL J MCCLUSKIE,HEATHER L DAVIS
            PC
            A61K39/00,A61K9/10,A61K9/16,A61K9/50,A61K9/51,A61K31/70,A61K39/ PC
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            CC   immunostimulatory synthetic oligonucleotide
            FH   Key             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 6
BD261563
LOCUS       BD261563                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Vaccine.
ACCESSION   BD261563
VERSION     BD261563.1  GI:33071331
KEYWORDS    JP 2002542203-A/4.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Friede,M., Garcon,N. and Hermand,P.
  TITLE     Vaccine
  JOURNAL   Patent: JP 2002542203-A 4 10-DEC-2002;
            SMITHKLINE BEECHAM BIOLOGICALS SA
COMMENT     OS   Homo sapiens (human)
            PN   JP 2002542203-A/4
            PD   10-DEC-2002
            PF   04-APR-2000 JP 2000611936 .
            PR   19-APR-1999 GB    9908885.8,29-APR-1999 US    09/301829 PI
            MARTIN FRIEDE,NATHALIE GARCON,PHILIPPE HERMAND PC
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 7
BD267904
LOCUS       BD267904                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Methods for the prevention and treatment of parasitic infections
            and related diseases using CPG oligonucleotides.
ACCESSION   BD267904
VERSION     BD267904.1  GI:33077672
KEYWORDS    JP 2002513763-A/77.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Gramzinski,R.A., Krieg,A.M., Davis,H.L. and Hoffman,S.L.
  TITLE     Methods for the prevention and treatment of parasitic infections
            and related diseases using CPG oligonucleotides
  JOURNAL   Patent: JP 2002513763-A 77 14-MAY-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION, OTTAWA CIVIC LOEB RESEARCH
            INSTITUTE, UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY
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COMMENT     OS   Artificial Sequence
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            PD   14-MAY-2002
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            PR   06-MAY-1998 US    60/084512
            PI   ROBERT A GRAMZINSKI,ARTHUR M KRIEG,HEATHER L DAVIS,STEPHEN L
            PI   HOFFMAN
            PC   A61K31/711,A61K9/127,A61K38/00,A61K38/22,A61K45/00,A61P31/00,
            PC   A61P33/00//
            PC   C12N15/09,A61K37/02,A61K37/24,C12N15/00
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 8
BD270804
LOCUS       BD270804                 24 bp    DNA     linear   PAT 17-JUL-2003
DEFINITION  Stereoisomer of CpG oligonucleotide and method relating thereto.
ACCESSION   BD270804
VERSION     BD270804.1  GI:33080572
KEYWORDS    JP 2002521489-A/77.
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M.
  TITLE     Stereoisomer of CpG oligonucleotide and method relating thereto
  JOURNAL   Patent: JP 2002521489-A 77 16-JUL-2002;
            UNIVERSITY OF IOWA RESEARCH FOUNDATION
COMMENT     OS   Artificial Sequence
            PN   JP 2002521489-A/77
            PD   16-JUL-2002
            PF   27-JUL-1999 JP 2000562385
            PR   27-JUL-1998 US    60/094370
            PI   ARTHUR M KRIEG
            PC   A61K31/711,A61P11/06,A61P17/00,A61P27/02,A61P29/00,A61P31/00,
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 9
CQ769070
LOCUS       CQ769070                  24 bp    DNA     linear   PAT 04-MAR-2004
DEFINITION  Sequence 19 from Patent WO2004007743.
ACCESSION   CQ769070
VERSION     CQ769070.1  GI:45112695
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Wagner,H., Kretzschmar,H. and Sethi,S.
  TITLE     Use of cpg nucleic acids in prion-disease
  JOURNAL   Patent: WO 2004007743-A 19 22-JAN-2004;
            Coley Pharmaceutical GmbH (DE)
FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 10
CQ788116
LOCUS       CQ788116                  24 bp    DNA     linear   PAT 24-MAR-2004
DEFINITION  Sequence 47 from Patent WO2004019979.
ACCESSION   CQ788116
VERSION     CQ788116.1  GI:45723024
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Ellis,J.H. and Ashman,C.
  TITLE     Vaccine
  JOURNAL   Patent: WO 2004019979-A 47 11-MAR-2004;
            GLAXO GROUP LIMITED (GB)
FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 11
CQ788202
LOCUS       CQ788202                  24 bp    DNA     linear   PAT 24-MAR-2004
DEFINITION  Sequence 65 from Patent WO2004019974.
ACCESSION   CQ788202
VERSION     CQ788202.1  GI:45723052
KEYWORDS    .
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Ashman,C. and Ellis,J.H.
  TITLE     Vaccine
  JOURNAL   Patent: WO 2004019974-A 65 11-MAR-2004;
            GLAXO GROUP LIMITED (GB); GlaxoSmithKline (GB)
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RESULT 12
CQ815138
LOCUS       CQ815138                  24 bp    DNA     linear   PAT 24-MAY-2004
DEFINITION  Sequence 27 from Patent WO2004031222.
ACCESSION   CQ815138
VERSION     CQ815138.1  GI:47604216
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Gough,G.W. and Roberts,C.M.
  TITLE     Vaccine
  JOURNAL   Patent: WO 2004031222-A 27 15-APR-2004;
            GLAXO GROUP LIMITED (GB)
FEATURES             Location/Qualifiers
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ORIGIN

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 13
CQ875565
LOCUS       CQ875565                  24 bp    DNA     linear   PAT 27-SEP-2004
DEFINITION  Sequence 1 from Patent WO2004076677.
ACCESSION   CQ875565
VERSION     CQ875565.1  GI:52748523
KEYWORDS    .
SOURCE      synthetic construct
  ORGANISM  synthetic construct
            other sequences; artificial sequences.
REFERENCE   1
  AUTHORS   Lanzavecchia,A.
  TITLE     Monoclonal antibody production by ebv transformation of b cells
  JOURNAL   Patent: WO 2004076677-A 1 10-SEP-2004;
            Institute for Research in Biomedicine (CH)
FEATURES             Location/Qualifiers
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 14
AR182831
LOCUS       AR182831                 24 bp    DNA     linear   PAT 20-APR-2002
DEFINITION  Sequence 3 from patent US 6339068.
ACCESSION   AR182831
VERSION     AR182831.1  GI:20226038
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M., Davis,H.L., Wu,T. and Schorr,J.
  TITLE     Vectors and methods for immunization or therapeutic protocols
  JOURNAL   Patent: US 6339068-A 3 15-JAN-2002;
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 15
AR182894
LOCUS       AR182894                 24 bp    DNA     linear   PAT 20-APR-2002
DEFINITION  Sequence 66 from patent US 6339068.
ACCESSION   AR182894
VERSION     AR182894.1  GI:20226101
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 24)
  AUTHORS   Krieg,A.M., Davis,H.L., Wu,T. and Schorr,J.
  TITLE     Vectors and methods for immunization or therapeutic protocols
  JOURNAL   Patent: US 6339068-A 66 15-JAN-2002;
FEATURES             Location/Qualifiers
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SUMMARIES

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5	24	100.0	24	2	AAV83715	Aav83715 Synthetic
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7	24	100.0	24	3	AAZ61001	Aaz61001 Nucleotid
8	24	100.0	24	3	AAZ48012	Aaz48012 Immune re
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11	24	100.0	24	3	AAZ47671	Aaz47671 Parasitic
12	24	100.0	24	3	AAA63588	Aaa63588 Immune st
13	24	100.0	24	3	AAA63586	Aaa63586 Immune st
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42	24	100.0	24	4	AAH44490	Aah44490 CpG adjuv
43	24	100.0	24	5	AAS08982	Aas08982 CpG-conta
44	24	100.0	24	6	ABK48091	Abk48091 CpG oligo
45	24	100.0	24	6	ABS78483	Abs78483 Angiogene

ALIGNMENTS

RESULT 1
AAV60953
ID AAV60953 standard; DNA; 24 BP.
XX
AC AAV60953;
XX
DT 14-DEC-1998 (first entry)
XX
DE Unmethylated cytosine-guanine dinucleotide containing oligonucleotide 4.
XX
KW ss; unmethylated CpG dinucleotide; immune response; natural killer cell;
KW Th2 response; Th1 response; Th1 cytokine; hepatitis B.
XX
OS Synthetic.
XX
PN WO9840100-A1.
XX
PD 17-SEP-1998.
XX
PF 10-MAR-1998; 98WO-US004703.
XX
PR 10-MAR-1997; 97US-0040376P.
XX
PA (OTTA-) OTTAWA CIVIC LOEB RES INST.
PA (QIAG-) QIAGEN GMBH.
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Davis HL, Schorr J, Krieg AM;
XX
DR WPI; 1998-520792/44.
XX
PT Use of oligonucleotides containing an unmethylated CpG dinucleotide -
PT useful as, e.g. adjuvant with antigen, or nucleic acid encoding antigen
PT for inducing immune response in subject.
XX
PS Disclosure; Page 12; 67pp; English.
XX
CC Oligonucleotides containing at least 1 unmethylated CpG dinucleotide
CC affect the immune response in a subject by activating natural killer
CC cells or redirecting a subject's immune response from a Th2 to a Th1
CC response by inducing monocytic and other cells to produce Th1 cytokines.
CC These nucleic acids containing at least 1 unmethylated CpG can be used as
CC an adjuvant, specifically to induce an immune response against an

```
CC   antigenic protein, and are used particularly for virally mediated
CC   disorders, e.g. hepatitis B virus infection
XX
SQ   Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 24;  DB 2;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 2
AAV47689
ID   AAV47689 standard; DNA; 24 BP.
XX
AC   AAV47689;
XX
DT   20-NOV-1998  (first entry)
XX
DE   Unmethylated CpG dinucleotide.
XX
KW   Unmethylated CpG dinucleotide; immune response; bacterial meningitis;
KW   natural killer cell activation; NK cell; Th2 response; neonatal sepsis;
KW   pulmonary disorder; asthma; environmentally induced airway disease;
KW   bacterial infection; endotoxaemia; therapy; cystic fibrosis;
KW   inflammatory bowel disease; ss.
XX
OS   Synthetic.
XX
PN   WO9837919-A1.
XX
PD   03-SEP-1998.
XX
PF   25-FEB-1998;   98WO-US003678.
XX
PR   28-FEB-1997;   97US-0039405P.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
XX
PI   Schwartz DA,  Krieg AM;
XX
DR   WPI; 1998-480941/41.
XX
PT   Use of nucleic acids containing an unmethylated CpG - for treating a
PT   subject having or at risk of having an acute decrement in air flow or
PT   inhibiting an inflammatory response.
XX
PS   Disclosure; Page 13; 65pp; English.
XX
CC   This sequence represents an unmethylated CpG dinucleotide, and can be
CC   used in the method of the invention. The method is for treating a subject
CC   having, or at risk of having an acute decrement in air flow, comprising
CC   administering a nucleic acid sequence containing at least one
CC   unmethylated CpG. The nucleic acids containing an unmethylated CpG
CC   dinucleotide affect an immune response in a subject by activating natural
CC   killer cells (NK) or redirecting a subject's immune response from a Th2
CC   to a Th1 response by inducing monocytic and other cells to produce Th1
CC   cytokines. They can be used to treat pulmonary disorders having an
CC   immunologic component, such as asthma or environmentally induced airway
CC   disease. They can also be used to treat diseases associated with Gram-
CC   positive bacterial infections or endotoxaemia including bacterial
CC   meningitis, neonatal sepsis, cystic fibrosis, inflammatory bowel disease
CC   and liver cirrhosis, Gram-negative pneumonia, Gram-negative abdominal
CC   abscess, haemorrhagic shock, disseminated intravascular coagulation, or
CC   an inflammatory response to lipopolysaccharide
XX
SQ   Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 24;  DB 2;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 3
AAV27664
ID   AAV27664 standard; DNA; 24 BP.
XX
AC   AAV27664;
XX
DT   01-OCT-1998  (first entry)
XX
DE   Immunostimulatory oligodeoxyribonucleotide of the invention.
XX
KW   Immunostimulatory; oligodeoxyribonucleotide; ODN;
KW   unmethylated CpG dinucleotide; activate; lymphocyte; immune response;
KW   Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
KW   desensitisation therapy; artificial adjuvant; antibody generation; ss.
XX
OS   Synthetic.
XX
PN   WO9818810-A1.
XX
PD   07-MAY-1998.
XX
PF   30-OCT-1997;   97WO-US019791.
XX
PR   30-OCT-1996;   96US-00738652.
XX
PA   (IOWA ) UNIV IOWA RES FOUND.
XX
PI   Krieg AM,  Kline JN;
XX
DR   WPI; 1998-272127/24.
XX
PT   New immunostimulatory nucleic acid molecules - which contain at least one
PT   unmethylated CpG dinucleotide, used for treating e.g. tumours, infections
PT   or autoimmune disease.
XX
PS   Claim 29; Page 83; 109pp; English.
XX
CC   AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs)
CC   of the invention. The ODNs contain at least one unmethylated CpG
CC   dinucleotide, and have the formula: 5' N1X1CGX2N2 3', where at least one
CC   nucleotide separates consecutive CpGs, X1 is adenine, guanine, or
CC   thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26
CC   bases with the provision that N1 and N2 does not contain a CCGG tetramer
CC   or more than one CCG or CGG trimer OR 5' NX1X2CGX3X4N 3', where at least
CC   one nucleotide separates consecutive CpGs, X1 and X2 are selected from
CC   GpT, GpG, GpA, ApT and ApA, X3and X4 are selected from TpT or CpT, N is
CC   any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2
CC   does not contain a CCGG tetramer or more than one CCG or CGG trimer. The
CC   ODNs activate lymphocytes in a subject and redirect a subject's immune
CC   response from a Th2 to a Th1 (e.g. by inducing monocytic cells and other
CC   cells to produce Th1 cytokines, including IL-12, IFN-gamma and GM-CSF).
CC   The ODNs can be used to treat or prevent an asthmatic disorder,
CC   autoimmune diseases, in desensitisation therapy, as an artificial
CC   adjuvant during antibody generation in a mammal such as a mouse or a
CC   human
XX
SQ   Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match             100.0%;  Score 24;  DB 2;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 2.4;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 4
AAZ41936
ID AAZ41936 standard; DNA; 24 BP.
XX
AC AAZ41936;
XX
DT 24-JAN-2000 (first entry)
XX
DE IL-12 secretion inducing CpG oligonucleotide 81.
XX
KW CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion;
KW human PBMC; immune response; cancer; HIV; bacterial disease; asthma;
KW neoplastic disorder; jaagsiekte; B cell; NK cell; ss; cytokine;
KW antigen presenting cell; infection; allergic disease.
XX
OS Synthetic.
XX
PN WO9951259-A2.
XX
PD 14-OCT-1999.
XX
PF 02-APR-1999; 99WO-US007335.
XX
PR 03-APR-1998; 98US-0080729P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
XX
PI Krieg AM, Weiner G;
XX
DR WPI; 1999-620169/53.
XX
PT Novel synergistic combinations of immunostimulatory oligonucleotides and
PT immunopotentiating cytokines are useful for stimulating the immune
PT system.
XX
PS Example 8; Page 86; 91pp; English.
XX
CC Sequences AAZ41856-Z41949 are phosphorothioate CpG oligonucleotides which
CC are used in the invention to induce interleukin-12 (IL-12) secretion from
CC human PBMC. The invention comprises stimulating an immune response in a
CC subject comprising administering to a subject exposed to an antigen, an
CC immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide
CC to induce a synergistic antigen specific immune response. The methods are
CC useful for treating cancer by stimulating an antigen specific immune
CC response against a cancer antigen. The methods can also be used to treat
CC neoplastic disorders in humans, including but not limited to: sarcoma,
CC carcinoma, fibroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma,
CC and glioma. The methods are also useful for treating infectious diseases,
CC e.g. viral diseases such as HIV, bacterial diseases, and fungal diseases.
CC The methods may also be used to treat allergic diseases, e.g. asthma. The
CC methods and compositions may also be applied to treat cancer and tumours
CC in non human subjects, e.g. cats and dogs. Neoplasias affecting
CC agricultural livestock may also be treated and include leukaemia,
CC haemangiopericytoma and bovine ocular neoplasia. Chronic, infectious,
CC contagious diseases of sheep and goats caused by the bacterium
CC Corynebacterium pseudotuberculosis, and contagious lung tumour of sheep
CC caused by jaagsiekte may also be treated. CpG oligonucleotides can be
CC useful in activating B cells, NK cells, and antigen presenting cells,
CC such as monocytes and macrophages. CpG oligonucleotides enhance antibody
CC dependent cellular cytotoxicity and can be used as an adjuvant in
CC conjunction with tumour antigens to protect against a tumour challenge
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 5
AAV83715
ID AAV83715 standard; DNA; 24 BP.
XX
AC AAV83715;
XX
DT 20-MAR-2003 (revised)
DT 15-MAR-1999 (first entry)
XX
DE Synthetic oligonucleotide with CpG-N motif #3.
XX
KW CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation;
KW viral antigen; bacterial antigen; parasite; therapeutic; growth factor;
KW toxins; tumour suppressor; cytokine; apoptotic protein; interferon;
KW hormone; clotting factor; ligand; receptor; ss.
XX
OS Synthetic.
XX
PN WO9852581-A1.
XX
PD 26-NOV-1998.
XX
PF 20-MAY-1998; 98WO-US010408.
XX
PR 20-MAY-1997; 97US-0047209P.
PR 20-MAY-1997; 97US-0047233P.
XX
PA (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
PA (IOWA) UNIV IOWA RES FOUND.
PA (QIAG-) QIAGEN GMBH.
XX
PI Davis HL, Krieg AM, Schorr J, Wu T;
XX
DR WPI; 1999-059712/05.
XX
PT Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for
PT enhancing the immunostimulatory effect of an antigen or enhancing the
PT expression of a therapeutic polypeptide.
XX
PS Claim 13; Page 86; 109pp; English.
XX
CC This sequence is used in the description of a method for enhancing the
CC immunostimulatory effect of an antigen encoded by nucleic acid contained
CC in a nucleic acid construct. The method involves determining the CpG-N
CC and CpG-S motifs present in the construct, removing neutralising CpG (CpG
CC -N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the
CC construct, thereby producing a nucleic acid construct having enhanced
CC immunostimulatory efficacy. The method can be used for immunisation
CC against viral antigens, e.g. from hepatitis B virus (HBV), bacterial
CC antigens or an antigen derived from a parasite. They can also be used for
CC expression of a therapeutic polypeptide, e.g. growth factors, toxins,
CC tumour suppressors, cytokines, apoptotic proteins, interferons, hormones,
CC clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to
CC correct PA field.)
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 6
AAV74252
ID AAV74252 standard; DNA; 24 BP.
XX
AC AAV74252;
XX

DT 20-MAR-2003 (revised)
DT 15-MAR-1999 (first entry)
XX
DE CpG-N motif SOS-ODN 2022 DNA.
XX
KW CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN;
KW viral antigen; bacterial antigen; parasite; therapeutic; growth factor;
KW toxin; tumour suppressor; cytokine; apoptotic protein; interferon;
KW hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
XX
OS Synthetic.
XX
PN WO9852581-A1.
XX
PD 26-NOV-1998.
XX
PF 20-MAY-1998; 98WO-US010408.
XX
PR 20-MAY-1997; 97US-0047209P.
PR 20-MAY-1997; 97US-0047233P.
XX
PA (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
PA (IOWA) UNIV IOWA RES FOUND.
PA (QIAG-) QIAGEN GMBH.
XX
PI Davis HL, Krieg AM, Schorr J, Wu T;
XX
DR WPI; 1999-059712/05.
XX
PT Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for
PT enhancing the immunostimulatory effect of an antigen or enhancing the
PT expression of a therapeutic polypeptide.
XX
PS Example 1; Page 64; 109pp; English.
XX
CC AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a
CC method for enhancing the immunostimulatory effect of an antigen encoded
CC by nucleic acid contained in a nucleic acid construct. The method
CC involves determining the CpG-N and CpG-S motifs present in the construct,
CC removing neutralising CpG (CpG-N) motifs and optionally inserting
CC stimulatory CpG (CpG-S) motifs in the construct, thereby producing a
CC nucleic acid construct having enhanced immunostimulatory efficacy. The
CC method can be used for immunisation against viral antigens, e.g. from
CC hepatitis B virus (HBV), bacterial antigens or an antigen derived from a
CC parasite. They can also be used for expression of a therapeutic
CC polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines,
CC apoptotic proteins, interferons, hormones, clotting factors, ligands and
CC receptors. (Updated on 20-MAR-2003 to correct PA field.)
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 7
AAZ61001
ID AAZ61001 standard; DNA; 24 BP.
XX
AC AAZ61001;
XX
DT 30-MAY-2000 (first entry)
XX
DE Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
XX
KW Immunostimulatory; stereoisomer; CpG oligonucleotide; Th2; Th1; asthma;
KW allergic reaction; allergen; cancer antigen; cancer; immunoinhibitory;
KW inflammatory disease; inflammatory bowel disease; autoimmune disease;
KW gingivitis; psoriasis; sepsis; ss.
XX
OS Synthetic.
XX
PN WO200006588-A1.
XX
PD 10-FEB-2000.
XX
PF 27-JUL-1999; 99WO-US017100.
XX
PR 27-JUL-1998; 98US-0094370P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Krieg AM;
XX
DR WPI; 2000-195254/17.
XX
PT Immunostimulatory and immunoinhibitory stereoisomers of CpG
PT oligonucleotides useful for immunotherapy of cancer.
XX
PS Disclosure; Page 12; 88pp; English.
XX
CC AAZ60933-Z61015 represent immunostimulatory stereoisomers of CpG
CC oligonucleotides. The sequences are derived from generic nucleic acid
CC sequence, from which immunoinhibitory sequences may also be derived. The
CC immunostimulatory nucleic acids can be co-administered with an antigen to
CC induce an antigen-specific immune response. The immunostimulatory nucleic
CC acids can also be used in methods for redirecting a subject's immune
CC response from a Th2 to a Th1, for treating asthma, for desensitising a
CC subject against the occurrence of an allergic reaction in response to
CC contact with an allergen, for activating an immune cell, especially a
CC lymphocyte or a dendritic cell expressing a cancer antigen or for
CC treating cancer. The immunoinhibitory nucleic acid can be used to prevent
CC an immune response, especially where the immune response in the subject
CC is excessive due to having received an immune stimulating compound. The
CC immunoinhibitory nucleic acid can be used to treat a subject having or at
CC risk of an inflammatory disease, especially inflammatory bowel disease,
CC autoimmune disease, gingivitis, psoriasis and sepsis
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 8
AAZ48012
ID AAZ48012 standard; DNA; 24 BP.
XX
AC AAZ48012;
XX
DT 08-MAR-2000 (first entry)
XX
DE Immune remodeling inducing CpG oligonucleotide SEQ ID NO:90.
XX
KW Haematopoiesis; regulation; CpG oligonucleotide; phosphorothioate;
KW immune remodeling; thrombopoiesis; anaemia; immune system; cancer;
KW immune response; allergic reaction; infectious disease; asthma;
KW thrombocytopaenia; immunohaemolytic disorder; genetic disorder;
KW haemoglobinopathy; kidney failure; chronic inflammatory disorder;
KW rheumatoid arthritis; ss.
XX
OS Synthetic.
XX
PN WO9958118-A2.
XX

PD 18-NOV-1999.
XX
PF 14-MAY-1999; 99WO-IB001285.
XX
PR 14-MAY-1998; 98US-0085516P.
PR 02-FEB-1999; 99US-00241653.
XX
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS GMBH.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Wagner H, Lipford G;
XX
DR WPI; 2000-062261/05.
XX
PT Use of CpG containing oligonucleotides for, e.g. inducing an antigen-
PT specific immune response.
XX
PS Example 1; Page 66; 116pp; English.
XX
CC The present invention describes a method using CpG containing
CC oligonucleotides (ONs) for regulating immune system remodeling and for
CC regulating haematopoiesis. The method for inducing an antigen-specific
CC immune response comprises: (1) administering an ON having a sequence
CC including at least the formula (I); and (2) exposing the subject to an
CC antigen at least 3 days after the ON is administered to the subject to
CC produce an antigen-specific immune response: 5' X1CGX2 3' (I), where the
CC ON = includes at least 8 nucleotides; C and G = unmethylated, and X1 and
CC X2 = nucleotides. The method can be used for inducing an immune response
CC against an antigen such as cells, cell extracts, proteins,
CC polysaccharides, polysaccharide conjugates, lipids, glycolipids,
CC carbohydrate, viral extracts, viruses, bacteria, fungi, parasites and
CC allergens. It can be used in a subject at risk of developing cancer or an
CC allergic reaction. It can also be used for treating an infectious
CC disease, allergic diseases and asthma, as well as thrombocytopaenia which
CC is drug-induced, due to an autoimmune disorder such as idiopathic
CC thrombocytopenic purpura, or resulting from accidental or therapeutic
CC radiation exposure. It can also be used for treating anaemia such as drug
CC -induced anaemia, immunohaemolytic disorder, genetic disorders such as
CC haemoglobinopathy and inherited haemolytic anaemia, inadequate production
CC despite adequate iron stores, chronic disease such as kidney failure, and
CC chronic inflammatory disorder such as rheumatoid arthritis, or anaemia
CC resulting from accidental or therapeutic radiation exposure. AAZ47932 to
CC AAZ48029 represent phosphorothioate CpG oligonucleotides used in the
CC exemplification of the present invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 9
AAZ47876
ID AAZ47876 standard; DNA; 24 BP.
XX
AC AAZ47876;
XX
DT 07-MAR-2000 (first entry)
XX
DE Immunostimulatory oligonucleotide sequence SEQ ID NO:77.
XX
KW Mucosal immunity; immunostimulatory; CpG motif; immune response; antigen;
KW allergic reaction; cancer; infectious disease; asthma; eczema;
KW allergic rhinitis; coryza; hay fever; conjunctivitis; bronchial asthma;
KW urticaria; food allergy; atopic condition; mucosal delivery; ss.
XX
OS Synthetic.
XX

PN WO9961056-A2.
XX
PD 02-DEC-1999.
XX
PF 21-MAY-1999; 99WO-US011359.
XX
PR 22-MAY-1998; 98US-0086393P.
XX
PA (LOEB-) LOEB HEALTH RES INST AT OTTAWA HOSPITAL.
PA (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
XX
PI Mccluskie MJ, Davis HL;
XX
DR WPI; 2000-062585/05.
XX
PT Use of CG containing oligonucleotides as adjuvants for inducing an immune
PT response.
XX
PS Disclosure; Page 25; 116pp; English.
XX
CC The present invention describes a method using CpG containing
CC oligonucleotides (ONs) as adjuvants for inducing an immune response. The
CC method for inducing a mucosal immune response (MIR) comprises: (1)
CC administering to a mucosal surface of a subject an ON, having a sequence
CC including at least the formula (I); and (2) exposing the subject to an
CC antigen to induce the MIR, where the antigen is not encoded in a nucleic
CC acid vector: 5'X1X2CGX3X43' (I), where C and G = unmethylated, and X1,
CC X2, X3 and X4 = nucleotides. The method can be used for treating a
CC subject at risk of developing an allergic reaction, cancer or infectious
CC disease. It can be used for treating asthmatic subjects, eczema, allergic
CC rhinitis or coryza, hay fever, conjunctivitis, bronchial asthma,
CC urticaria, food allergies or other atopic conditions. The antigen may be
CC derived from infectious organisms such as infectious bacteria, viruses,
CC parasites or fungi. It can be used in humans or animals, e.g. bovine,
CC equine, feline, swine, aquatic or avian species. The ONs act as potent
CC mucosal adjuvants to induce immune responses at both local and remote
CC sites against an antigen administered to the mucosal tissue. Both
CC systemic and mucosal immunity are induced by mucosal delivery of the ONs.
CC AAZ47808 to AAZ47891 represent examples of immunostimulatory
CC oligonucleotides given in the present invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 10
AAA39265
ID AAA39265 standard; DNA; 24 BP.
XX
AC AAA39265;
XX
DT 08-SEP-2000 (first entry)
XX
DE CpG immunostimulatory oligonucleotide #3.
XX
KW CpG; immunostimulatory; adjuvant; vaccine; metal salt; antiviral;
KW antibacterial; antiprotozoal; antimalarial; anti-allergic; anticancer;
KW immune response; infection; allergy; cancer; ss.
XX
OS Unidentified.
XX
PN WO200023105-A2.
XX
PD 27-APR-2000.
XX
PF 08-OCT-1999; 99WO-EP007764.

XX
PR 16-OCT-1998; 98GB-00022703.
PR 16-OCT-1998; 98GB-00022709.
PR 16-OCT-1998; 98GB-00022712.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI Garcon N;
XX
DR WPI; 2000-339525/29.
XX
PT Adjuvant composition comprising immunostimulant, useful for preparing
PT vaccines, deposited on metal salt particle that contains no antigen,
PT which is present on separate particles.
XX
PS Disclosure; Page 6; 37pp; English.
XX
CC The present invention describes an adjuvant composition (A) comprising an
CC immunostimulant (I) absorbed on a metallic salt particle (II) that is
CC practically free of antigen (Ag). Also described are: (1) preparation of
CC a vaccine by mixing (A) with Ag; (2) vaccine comprising two major
CC populations of complexes, one comprising (A) and the other Ag adsorbed on
CC (II); and (3) kit comprising, in separate containers, monophosphoryl
CC lipid A (MPL) adsorbed on metal salt and Ag adsorbed on metal salt. (A)
CC has antiviral, antibacterial, antiprotozoal, antimalarial, anti-allergic
CC and anticancer activities, and can be used to induce a specific immune
CC response. (A) are used in preparation of vaccines for treatment or
CC prevention of a wide range of viral, bacterial and protozoal infections,
CC also allergy and cancers. By adsorbing (I) and Ag on separate particles,
CC vaccines (including those containing many Ag) can be produced simply by
CC mixing, rather than by sequential adsorption of many components on to the
CC same particles (which is time-consuming, expensive and difficult to
CC control). The components may be tested individually and failure of any
CC one component does not require rejection of an entire batch of vaccine.
CC The new vaccines are as effective as those prepared conventionally. The
CC present sequence represents a CpG immunostimulatory oligonucleotide which
CC is used in the exemplification of the present invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 11
AAZ47671
ID AAZ47671 standard; DNA; 24 BP.
XX
AC AAZ47671;
XX
DT 01-MAR-2000 (first entry)
XX
DE Parasitic infection preventing exemplary oligonucleotide SEQ ID NO:77.
XX
KW Immune system; immunostimulatory; parasitic infection; parasite;
KW CpG oligonucleotide; antigen presenting cell; natural killer cell;
KW granulocyte; malaria; helminth disease; tick; mite; ss.
XX
OS Synthetic.
XX
PN WO9956755-A1.
XX
PD 11-NOV-1999.
XX
PF 06-MAY-1999; 99WO-US009863.
XX
PR 06-MAY-1998; 98US-0084512P.
XX
PA (IOWA) UNIV IOWA RES FOUND.
PA (OTTA-) OTTAWA CIVIC LOEB RES INST.
PA (USNA) US SEC OF NAVY.
XX
PI Gramzinski RA, Krieg AM, Davis HL, Hoffman SL;
XX
DR WPI; 2000-062123/05.
XX
PT Treating and preventing parasitic infections using CpG oligonucleotides.
XX
PS Disclosure; Page 21; 74pp; English.
XX
CC The present invention describes a method for treating and preventing
CC parasitic infection by administration of unmethylated CpG
CC oligonucleotides. The CpG oligonucleotides are able to stimulate the
CC innate immune system via the activation of immune cells, such as antigen
CC presenting cells, natural killer cells and granulocytes. The CpG
CC oligonucleotides and the method can be used to treat and prevent
CC parasitic diseases, such as malaria, helminth diseases, tick and mites in
CC humans, animals and poultry. The oligonucleotides may be administered in
CC conjunction with parasiticides or other therapeutic compounds after an
CC organism has been diagnosed to be infected with parasites. Diseases which
CC can be treated or prevented include those caused by Plasmodium
CC falciparum, P. ovale, P. malariae, P. vivax, P. knowlesi, Babesia
CC microti, B. divergens, Trypanosoma cruzi, T. gambiense, T. rhodesiense,
CC Schistosoma mansoni, Toxoplasma gondii, Trichinella spiralis, Leishmania
CC major, L. donovani, L. braziliensis, and L. tropica. The parasite is
CC especially capable of causing malaria. The present sequence represents a
CC parasitic infection preventing exemplary oligonucleotide sequence from
CC the present invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 12
AAA63588
ID AAA63588 standard; DNA; 24 BP.
XX
AC AAA63588;
XX
DT 04-DEC-2000 (first entry)
XX
DE Immune stimulatory nucleic acid stimulating NK cell lytic activity.
XX
KW Viral core antigen; HBcAg; hapten presentation; immune response;
KW TH1 immune response; gene therapy; ss.
XX
OS Unidentified.
XX
PN WO200046365-A1.
XX
PD 10-AUG-2000.
XX
PF 02-FEB-2000; 2000WO-US002413.
XX
PR 02-FEB-1999; 99US-0118526P.
XX
PA (UYVI-) UNIV VIRGINIA COMMONWEALTH.
PA (BIOC-) BIOCACHE PHARM LLC.
XX
PI Coleman TP, Peterson DL;
XX
DR WPI; 2000-532900/48.
XX
PT A composition useful for inducing an immune response comprises

PT nucleocapsid protein monomers, derived from duck hepatitis B virus, which
PT are assembled to form a particle.
XX
PS Claim 7; Page 23; 67pp; English.
XX
CC The present sequence represents an immune stimulatory nucleic acid, which
CC is included in the particles of the invention. The structure of these
CC particles is based in part on duck hepatitis B viral core antigen
CC (HBcAg). The particles are used for hapten presentation so as to elicit
CC an immune response. The particles are formed by assembling recombinant
CC forms of duck HBcAg, and are highly immunmogenic. Native duck HBcAg
CC particles are 32-34 nm particles composed of 240 identical subunit
CC monomers, and are very similar to human HBcAg. However, duck HBcAg is not
CC cross-reactive with human HBcAg. Recombinant forms of duck hepatitis B
CC virus elicit a TH1 (T helper cell) immune response. The duck HBcAg
CC particles are used to elicit an immune response in a patient.
CC Polynucleotides encoding the particles may be used in gene therapy
CC protocols
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 13
AAA63586
ID AAA63586 standard; DNA; 24 BP.
XX
AC AAA63586;
XX
DT 04-DEC-2000 (first entry)
XX
DE Immune stimulatory nucleic acid stimulating cytokine production.
XX
KW Viral core antigen; HBcAg; hapten presentation; immune response;
KW TH1 immune response; gene therapy; ss.
XX
OS Unidentified.
XX
PN WO200046365-A1.
XX
PD 10-AUG-2000.
XX
PF 02-FEB-2000; 2000WO-US002413.
XX
PR 02-FEB-1999; 99US-0118526P.
XX
PA (UYVI-) UNIV VIRGINIA COMMONWEALTH.
PA (BIOC-) BIOCACHE PHARM LLC.
XX
PI Coleman TP, Peterson DL;
XX
DR WPI; 2000-532900/48.
XX
PT A composition useful for inducing an immune response comprises
PT nucleocapsid protein monomers, derived from duck hepatitis B virus, which
PT are assembled to form a particle.
XX
PS Claim 7; Page 22; 67pp; English.
XX
CC The present sequence represents an immune stimulatory nucleic acid, which
CC is included in the particles of the invention. The structure of these
CC particles is based in part on duck hepatitis B viral core antigen
CC (HBcAg). The particles are used for hapten presentation so as to elicit
CC an immune response. The particles are formed by assembling recombinant
CC forms of duck HBcAg, and are highly immunmogenic. Native duck HBcAg
CC particles are 32-34 nm particles composed of 240 identical subunit
CC monomers, and are very similar to human HBcAg. However, duck HBcAg is not
CC cross-reactive with human HBcAg. Recombinant forms of duck hepatitis B
CC virus elicit a TH1 (T helper cell) immune response. The duck HBcAg
CC particles are used to elicit an immune response in a patient.
CC Polynucleotides encoding the particles may be used in gene therapy
CC protocols
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 14
AAA63598
ID AAA63598 standard; DNA; 24 BP.
XX
AC AAA63598;
XX
DT 04-DEC-2000 (first entry)
XX
DE Immune stimulatory nucleic acid stimulating B cell proliferation.
XX
KW Viral core antigen; HBcAg; hapten presentation; immune response;
KW TH1 immune response; gene therapy; ss.
XX
OS Unidentified.
XX
PN WO200046365-A1.
XX
PD 10-AUG-2000.
XX
PF 02-FEB-2000; 2000WO-US002413.
XX
PR 02-FEB-1999; 99US-0118526P.
XX
PA (UYVI-) UNIV VIRGINIA COMMONWEALTH.
PA (BIOC-) BIOCACHE PHARM LLC.
XX
PI Coleman TP, Peterson DL;
XX
DR WPI; 2000-532900/48.
XX
PT A composition useful for inducing an immune response comprises
PT nucleocapsid protein monomers, derived from duck hepatitis B virus, which
PT are assembled to form a particle.
XX
PS Claim 7; Page 23; 67pp; English.
XX
CC The present sequence represents an immune stimulatory nucleic acid, which
CC is included in the particles of the invention. The structure of these
CC particles is based in part on duck hepatitis B viral core antigen
CC (HBcAg). The particles are used for hapten presentation so as to elicit
CC an immune response. The particles are formed by assembling recombinant
CC forms of duck HBcAg, and are highly immunmogenic. Native duck HBcAg
CC particles are 32-34 nm particles composed of 240 identical subunit
CC monomers, and are very similar to human HBcAg. However, duck HBcAg is not
CC cross-reactive with human HBcAg. Recombinant forms of duck hepatitis B
CC virus elicit a TH1 (T helper cell) immune response. The duck HBcAg
CC particles are used to elicit an immune response in a patient.
CC Polynucleotides encoding the particles may be used in gene therapy
CC protocols
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 2.4;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 15
AAC60280
ID AAC60280 standard; DNA; 24 BP.
XX
AC AAC60280;
XX
DT 14-FEB-2001 (first entry)
XX
DE Immunostimulatory oligonucleotide #4.
XX
KW Immunostimulatory; oligonucleotide; cancer; allergy; Alzheimer's disease;
KW atherosclerosis; viral; bacterial; parasitic; infection; ss.
XX
OS Homo sapiens.
XX
PN WO200062800-A2.
XX
PD 26-OCT-2000.
XX
PF 04-APR-2000; 2000WO-EP002920.
XX
PR 19-APR-1999; 99GB-00008885.
PR 29-APR-1999; 99US-00301829.
XX
PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
PI Friede M, Garcon N, Hermand P;
XX
DR WPI; 2000-687101/67.
XX
PT Adjuvant composition comprising saponin and immunostimulatory
PT oligonucleotide CpG, useful for producing vaccine formulations for
PT prophylaxis and treatment of cancers, allergy and Alzheimer's disease.
XX
PS Claim 5; Page 5; 52pp; English.
XX
CC The present invention relates to an adjuvant composition comprising a
CC saponin and an immunostimulatory oligonucleotide. A vaccine composition
CC containing the adjuvant is useful for inducing an immune response in an
CC individual and for preventing or treating disease. Diseases include
CC cancers; allergy; Alzheimer's disease and atherosclerosis. The vaccine is
CC also useful for prophylaxis and treatment of viral, bacterial and
CC parasitic infections. The present sequence is an oligonucleotide of the
CC invention
XX
SQ Sequence 24 BP; 0 A; 4 C; 6 G; 14 T; 0 U; 0 Other;

  Query Match   100.0%; Score 24; DB 3; Length 24;
  Best Local Similarity   100.0%; Pred. No. 2.4;
  Matches   24; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Search completed: August 5, 2005, 03:27:13
Job time : 1191 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 02:53:53 ; Search time 726 Seconds
(without alignments)
54.092 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1202784 seqs, 818138359 residues

Total number of hits satisfying chosen parameters: 2405568

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		24	100.0	24	3	US-09-030-701-6	Sequence 6, Appli
2		24	100.0	24	3	US-09-286-098-90	Sequence 90, Appl
3		24	100.0	24	3	US-08-960-774-46	Sequence 46, Appl
4		24	100.0	24	3	US-09-082-649B-3	Sequence 3, Appli
5		24	100.0	24	3	US-09-082-649B-66	Sequence 66, Appl
6		24	100.0	24	3	US-09-325-193A-77	Sequence 77, Appl
7		24	100.0	24	3	US-09-191-170-84	Sequence 84, Appl
8		24	100.0	24	3	US-09-191-170-95	Sequence 95, Appl
9		24	100.0	24	4	US-09-690-921-4	Sequence 4, Appli
10		24	100.0	24	4	US-09-337-619-46	Sequence 46, Appl
11		24	100.0	24	4	US-09-965-101-3	Sequence 3, Appli
12		24	100.0	24	4	US-09-965-101-66	Sequence 66, Appl
13		24	100.0	52	3	US-09-082-649B-15	Sequence 15, Appl
14		24	100.0	52	4	US-09-965-101-15	Sequence 15, Appl
15		23	95.8	23	4	US-09-337-619-123	Sequence 123, App
16		17.8	74.2	2104	1	US-08-682-193A-1	Sequence 1, Appli
17	c	17.6	73.3	1347	4	US-09-533-029-39	Sequence 39, Appl
18	c	17.6	73.3	41199	4	US-09-949-016-17269	Sequence 17269, A
19		17.4	72.5	45314	4	US-09-949-016-14927	Sequence 14927, A
20		16.8	70.0	137394	4	US-09-949-016-13872	Sequence 13872, A
21		16.8	70.0	137743	4	US-09-949-016-12178	Sequence 12178, A
22	c	16.6	69.2	483	4	US-09-270-767-9585	Sequence 9585, Ap
23	c	16.6	69.2	483	4	US-09-270-767-24867	Sequence 24867, A
24	c	16.6	69.2	492	4	US-09-252-991A-11803	Sequence 11803, A
25	c	16.6	69.2	576	1	US-08-086-428B-16	Sequence 16, Appl
26	c	16.6	69.2	576	2	US-08-468-570-16	Sequence 16, Appl
27	c	16.6	69.2	576	2	US-08-290-665A-16	Sequence 16, Appl
28	c	16.6	69.2	576	4	US-08-466-601A-16	Sequence 16, Appl
29	c	16.6	69.2	576	5	PCT-US95-10398-16	Sequence 16, Appl
30		16.6	69.2	1269	3	US-08-858-207A-162	Sequence 162, App
31	c	16.6	69.2	1389	4	US-09-252-991A-11721	Sequence 11721, A
32		16.6	69.2	1421	4	US-09-270-767-12333	Sequence 12333, A
33	c	16.6	69.2	1695	4	US-09-489-039A-6876	Sequence 6876, Ap
34	c	16.6	69.2	1704	4	US-09-252-991A-11864	Sequence 11864, A
35		16.6	69.2	2322	4	US-09-252-991A-11519	Sequence 11519, A
36		16.6	69.2	4354	4	US-09-874-926-3	Sequence 3, Appli
37	c	16.6	69.2	114842	4	US-09-949-016-14993	Sequence 14993, A
38	c	16.4	68.3	601	4	US-09-949-016-72711	Sequence 72711, A
39	c	16.4	68.3	1056	4	US-09-107-532A-1672	Sequence 1672, Ap
40	c	16.2	67.5	273	4	US-09-134-000C-3160	Sequence 3160, Ap
41		16.2	67.5	448	4	US-09-270-767-5784	Sequence 5784, Ap
42		16.2	67.5	448	4	US-09-270-767-21066	Sequence 21066, A
43	c	16.2	67.5	764	4	US-09-270-767-7079	Sequence 7079, Ap
44	c	16.2	67.5	764	4	US-09-270-767-22361	Sequence 22361, A
45		16.2	67.5	10465	4	US-09-949-016-13136	Sequence 13136, A

ALIGNMENTS

RESULT 1
US-09-030-701-6
; Sequence 6, Application US/09030701B
; Patent No. 6214806
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Schwartz, David A.
; TITLE OF INVENTION: USE OF NUCLEIC ACIDS CONTAINING
; TITLE OF INVENTION: UNMETHYLATED CpG DINUCLEOTIDE IN THE TREATMENT OF
; TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS
; FILE REFERENCE: C1039/7011
; CURRENT APPLICATION NUMBER: US/09/030,701B
; CURRENT FILING DATE: 1998-02-25
; PRIOR APPLICATION NUMBER: 60/039,405
; PRIOR FILING DATE: 1997-02-28
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 6
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
US-09-030-701-6

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 2
US-09-286-098-90
; Sequence 90, Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Weiner, George
; TITLE OF INVENTION: Methods and Products for Stimulating the
; TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
; TITLE OF INVENTION: Cytokines
; FILE REFERENCE: C1039/7026/HCL
; CURRENT APPLICATION NUMBER: US/09/286,098
; CURRENT FILING DATE: 1999-04-02
; EARLIER APPLICATION NUMBER: US 60/080,729
; EARLIER FILING DATE: 1998-04-03
; NUMBER OF SEQ ID NOS: 105

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;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 90
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Sequence
US-09-286-098-90

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  Best Local Similarity   100.0%;  Pred. No. 0.29;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 3
US-08-960-774-46
; Sequence 46, Application US/08960774
; Patent No. 6239116
;  GENERAL INFORMATION:
;    APPLICANT:  Krieg et al.,
;    TITLE OF INVENTION:  IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
;    NUMBER OF SEQUENCES:  111
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII text
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/960,774
;      FILING DATE:  30-October-1997
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  U.S. Serial No. 6239116  08/738,652
;      FILING DATE:  October 30, 1996
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Haile, Lisa A.
;      REGISTRATION NUMBER:  38,347
;      REFERENCE/DOCKET NUMBER:  08918/012001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/678-5070
;      TELEFAX:  619/678-5099
;  INFORMATION FOR SEQ ID NO:  46:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  24 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-960-774-46

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.29;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 4
US-09-082-649B-3
; Sequence 3, Application US/09082649B
; Patent No. 6339068
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION:  Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE:  C1039/7009
;  CURRENT APPLICATION NUMBER: US/09/082,649B
;  CURRENT FILING DATE:  1998-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,233
;  PRIOR FILING DATE:  1997-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,209
;  PRIOR FILING DATE:  1997-05-20
;  NUMBER OF SEQ ID NOS:  85
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 3
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: Has a phosphorothioate backbone.
US-09-082-649B-3

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.29;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 5
US-09-082-649B-66
; Sequence 66, Application US/09082649B
; Patent No. 6339068
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION:  Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE:  C1039/7009
;  CURRENT APPLICATION NUMBER: US/09/082,649B
;  CURRENT FILING DATE:  1998-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,233
;  PRIOR FILING DATE:  1997-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,209
;  PRIOR FILING DATE:  1997-05-20
;  NUMBER OF SEQ ID NOS:  85
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 66
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
;   NAME/KEY: misc_feature
;   LOCATION: (0)...(0)
;   OTHER INFORMATION: Backbone is a phosphorothioate--phosphodiester
;   OTHER INFORMATION: chimera.
US-09-082-649B-66

  Query Match             100.0%;  Score 24;  DB 3;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 0.29;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 6
US-09-325-193A-77
; Sequence 77, Application US/09325193A
; Patent No. 6406705
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: Schorr, Joachim
; APPLICANT: Krieg, Arthur M.
; TITLE OF INVENTION: Use of Nucleic Acids Containing
; TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
; FILE REFERENCE: C1039/7025/HCL
; CURRENT APPLICATION NUMBER: US/09/325,193A
; CURRENT FILING DATE: 1999-06-03
; PRIOR APPLICATION NUMBER: US 09/154,614
; PRIOR FILING DATE: 1998-09-16
; PRIOR APPLICATION NUMBER: PCT/US98/04703
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: US 60/040,376
; PRIOR FILING DATE: 1997-03-10
; NUMBER OF SEQ ID NOS: 98
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-77

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 7
US-09-191-170-84
; Sequence 84, Application US/09191170
; Patent No. 6429199
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
; TITLE OF INVENTION: for Activating Dendritic Cells
; FILE REFERENCE: C1039/7017
; CURRENT APPLICATION NUMBER: US/09/191,170
; CURRENT FILING DATE: 1998-11-13
; EARLIER APPLICATION NUMBER: US 08/960,774
; EARLIER FILING DATE: 1997-10-30
; EARLIER APPLICATION NUMBER: US 08/738,652
; EARLIER FILING DATE: 1996-10-30
; EARLIER APPLICATION NUMBER: US 08/386,063
; EARLIER FILING DATE: 1995-02-07
; EARLIER APPLICATION NUMBER: US 08/276,358
; EARLIER FILING DATE: 1994-07-15
; NUMBER OF SEQ ID NOS: 99
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 84
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
US-09-191-170-84

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 8
US-09-191-170-95
; Sequence 95, Application US/09191170
; Patent No. 6429199
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
; TITLE OF INVENTION: for Activating Dendritic Cells
; FILE REFERENCE: C1039/7017
; CURRENT APPLICATION NUMBER: US/09/191,170
; CURRENT FILING DATE: 1998-11-13
; EARLIER APPLICATION NUMBER: US 08/960,774
; EARLIER FILING DATE: 1997-10-30
; EARLIER APPLICATION NUMBER: US 08/738,652
; EARLIER FILING DATE: 1996-10-30
; EARLIER APPLICATION NUMBER: US 08/386,063
; EARLIER FILING DATE: 1995-02-07
; EARLIER APPLICATION NUMBER: US 08/276,358
; EARLIER FILING DATE: 1994-07-15
; NUMBER OF SEQ ID NOS: 99
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 95
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (2)...(2)
; OTHER INFORMATION: m5c
; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (5)...(5)
; OTHER INFORMATION: m5c
; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (13)...(13)
; OTHER INFORMATION: m5c
; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (21)...(21)
; OTHER INFORMATION: m5c
US-09-191-170-95

Query Match 100.0%; Score 24; DB 3; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 9
US-09-690-921-4
; Sequence 4, Application US/09690921
; Patent No. 6544518
; GENERAL INFORMATION:
; APPLICANT: Friede, Martin
; APPLICANT: Gerard, Catherine
; APPLICANT: Hermand, Philippe

; TITLE OF INVENTION: Vaccines
; FILE REFERENCE: B45181-1
; CURRENT APPLICATION NUMBER: US/09/690,921
; CURRENT FILING DATE: 2000-10-18
; PRIOR APPLICATION NUMBER: PCT/EP00/02920
; PRIOR FILING DATE: 2000-04-04
; PRIOR APPLICATION NUMBER: 09/301,829
; PRIOR FILING DATE: 1999-04-29
; PRIOR APPLICATION NUMBER: 9908885.8
; PRIOR FILING DATE: 1999-04-19
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Human
US-09-690-921-4

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 10
US-09-337-619-46
; Sequence 46, Application US/09337619
; Patent No. 6653292
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; TITLE OF INVENTION: Methods of Treating Cancer Using
; TITLE OF INVENTION: Immunostimulatory Oligonucleotides
; FILE REFERENCE: C1039/7021/HCL
; CURRENT APPLICATION NUMBER: US/09/337,619
; CURRENT FILING DATE: 1999-06-21
; EARLIER APPLICATION NUMBER: US 08/960,774
; EARLIER FILING DATE: 1997-10-30
; EARLIER APPLICATION NUMBER: US 08/738,652
; EARLIER FILING DATE: 1996-10-30
; EARLIER APPLICATION NUMBER: US 08/386,063
; EARLIER FILING DATE: 1995-02-07
; EARLIER APPLICATION NUMBER: US 08/276,358
; EARLIER FILING DATE: 1994-07-15
; NUMBER OF SEQ ID NOS: 123
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 46
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-337-619-46

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 11
US-09-965-101-3
; Sequence 3, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Schorr, Joachim
; APPLICANT: Wu, Tong
; TITLE OF INVENTION: Vectors and Methods for Immunization or
; TITLE OF INVENTION: Therapeutic Protocols
; FILE REFERENCE: C1039/7057 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/965,101
; CURRENT FILING DATE: 2001-09-26
; PRIOR APPLICATION NUMBER: US 09/082,649
; PRIOR FILING DATE: 1998-05-20
; PRIOR APPLICATION NUMBER: US 60/047,233
; PRIOR FILING DATE: 1997-05-20
; PRIOR APPLICATION NUMBER: US 60/047,209
; PRIOR FILING DATE: 1997-05-20
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: Has a phosphorothioate backbone.
US-09-965-101-3

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 12
US-09-965-101-66
; Sequence 66, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Schorr, Joachim
; APPLICANT: Wu, Tong
; TITLE OF INVENTION: Vectors and Methods for Immunization or
; TITLE OF INVENTION: Therapeutic Protocols
; FILE REFERENCE: C1039/7057 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/965,101
; CURRENT FILING DATE: 2001-09-26
; PRIOR APPLICATION NUMBER: US 09/082,649
; PRIOR FILING DATE: 1998-05-20
; PRIOR APPLICATION NUMBER: US 60/047,233
; PRIOR FILING DATE: 1997-05-20
; PRIOR APPLICATION NUMBER: US 60/047,209
; PRIOR FILING DATE: 1997-05-20
; NUMBER OF SEQ ID NOS: 84
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 66
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: Backbone is a phosphorothioate--phosphodiester
; OTHER INFORMATION: chimera.
US-09-965-101-66

Query Match 100.0%; Score 24; DB 4; Length 24;
Best Local Similarity 100.0%; Pred. No. 0.29;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

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                    ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 13
US-09-082-649B-15
; Sequence 15, Application US/09082649B
; Patent No. 6339068
; GENERAL INFORMATION:
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION:  Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE:  C1039/7009
;  CURRENT APPLICATION NUMBER: US/09/082,649B
;  CURRENT FILING DATE:  1998-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,233
;  PRIOR FILING DATE:  1997-05-20
;  PRIOR APPLICATION NUMBER:  US 60/047,209
;  PRIOR FILING DATE:  1997-05-20
;  NUMBER OF SEQ ID NOS:  85
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 15
;   LENGTH: 52
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
US-09-082-649B-15

  Query Match             100.0%;  Score 24;  DB 3;  Length 52;
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  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          4 TCGTCGTTTTGTCGTTTTGTCGTT 27


RESULT 14
US-09-965-101-15
; Sequence 15, Application US/09965101
; Patent No. 6821957
; GENERAL INFORMATION:
;  APPLICANT: Davis, Heather L.
;  APPLICANT:  Krieg, Arthur M.
;  APPLICANT:  Schorr, Joachim
;  APPLICANT:  Wu, Tong
;  TITLE OF INVENTION: Vectors and Methods for Immunization or
;  TITLE OF INVENTION:  Therapeutic Protocols
;  FILE REFERENCE: C1039/7057 (HCL/MAT)
;  CURRENT APPLICATION NUMBER: US/09/965,101
;  CURRENT FILING DATE:  2001-09-26
;  PRIOR APPLICATION NUMBER: US 09/082,649
;  PRIOR FILING DATE: 1998-05-20
;  PRIOR APPLICATION NUMBER: US 60/047,233
;  PRIOR FILING DATE: 1997-05-20
;  PRIOR APPLICATION NUMBER: US 60/047,209
;  PRIOR FILING DATE: 1997-05-20
;  NUMBER OF SEQ ID NOS: 84
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 15
;   LENGTH: 52
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: synthetic oligonucleotide
US-09-965-101-15

  Query Match             100.0%;  Score 24;  DB 4;  Length 52;
  Best Local Similarity   100.0%;  Pred. No. 0.32;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          4 TCGTCGTTTTGTCGTTTTGTCGTT 27


RESULT 15
US-09-337-619-123
; Sequence 123, Application US/09337619
; Patent No. 6653292
; GENERAL INFORMATION:
;  APPLICANT: Krieg, Arthur M.
;  TITLE OF INVENTION: Methods of Treating Cancer Using
;  TITLE OF INVENTION: Immunostimulatory Oligonucleotides
;  FILE REFERENCE: C1039/7021/HCL
;  CURRENT APPLICATION NUMBER: US/09/337,619
;  CURRENT FILING DATE: 1999-06-21
;  EARLIER APPLICATION NUMBER: US 08/960,774
;  EARLIER FILING DATE: 1997-10-30
;  EARLIER APPLICATION NUMBER: US 08/738,652
;  EARLIER FILING DATE: 1996-10-30
;  EARLIER APPLICATION NUMBER: US 08/386,063
;  EARLIER FILING DATE: 1995-02-07
;  EARLIER APPLICATION NUMBER: US 08/276,358
;  EARLIER FILING DATE: 1994-07-15
;  NUMBER OF SEQ ID NOS: 123
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 123
;   LENGTH: 23
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-09-337-619-123

  Query Match             95.8%;  Score 23;  DB 4;  Length 23;
  Best Local Similarity   100.0%;  Pred. No. 0.75;
  Matches   23;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGT 23
              |||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGT 23


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GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 03:53:27 ; Search time 3392 Seconds
(without alignments)
45.866 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 7297361 seqs, 3241162794 residues

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	24	100.0	24	9	US-09-760-506-4	Sequence 4, Appli
2	24	100.0	24	9	US-09-768-012-4	Sequence 4, Appli
3	24	100.0	24	9	US-09-824-468-90	Sequence 90, Appl
4	24	100.0	24	9	US-09-800-266A-77	Sequence 77, Appl
5	24	100.0	24	9	US-09-895-007A-77	Sequence 77, Appl
6	24	100.0	24	9	US-09-920-313-77	Sequence 77, Appl
7	24	100.0	24	9	US-09-920-313-147	Sequence 147, App
8	24	100.0	24	10	US-09-927-422A-23	Sequence 23, Appl
9	24	100.0	24	10	US-09-888-326-729	Sequence 729, App
10	24	100.0	24	10	US-09-888-326-730	Sequence 730, App
11	24	100.0	24	10	US-09-888-326-731	Sequence 731, App
12	24	100.0	24	10	US-09-888-326-732	Sequence 732, App
13	24	100.0	24	10	US-09-888-326-733	Sequence 733, App
14	24	100.0	24	10	US-09-931-583-29	Sequence 29, Appl
15	24	100.0	24	10	US-09-931-583-38	Sequence 38, Appl
16	24	100.0	24	10	US-09-931-583-68	Sequence 68, Appl
17	24	100.0	24	10	US-09-927-884-14	Sequence 14, Appl
18	24	100.0	24	10	US-09-776-479-246	Sequence 246, App
19	24	100.0	24	10	US-09-776-479-262	Sequence 262, App
20	24	100.0	24	10	US-09-776-479-273	Sequence 273, App
21	24	100.0	24	10	US-09-776-479-300	Sequence 300, App
22	24	100.0	24	10	US-09-776-479-352	Sequence 352, App
23	24	100.0	24	10	US-09-776-479-412	Sequence 412, App
24	24	100.0	24	10	US-09-776-479-413	Sequence 413, App
25	24	100.0	24	10	US-09-776-479-964	Sequence 964, App
26	24	100.0	24	10	US-09-776-479-965	Sequence 965, App
27	24	100.0	24	10	US-09-776-479-966	Sequence 966, App
28	24	100.0	24	10	US-09-776-479-967	Sequence 967, App
29	24	100.0	24	10	US-09-954-987B-112	Sequence 112, App
30	24	100.0	24	10	US-09-954-987B-128	Sequence 128, App
31	24	100.0	24	11	US-09-776-479-246	Sequence 246, App
32	24	100.0	24	11	US-09-776-479-262	Sequence 262, App
33	24	100.0	24	11	US-09-776-479-273	Sequence 273, App
34	24	100.0	24	11	US-09-776-479-300	Sequence 300, App
35	24	100.0	24	11	US-09-776-479-352	Sequence 352, App
36	24	100.0	24	11	US-09-776-479-412	Sequence 412, App
37	24	100.0	24	11	US-09-776-479-413	Sequence 413, App
38	24	100.0	24	11	US-09-776-479-964	Sequence 964, App
39	24	100.0	24	11	US-09-776-479-965	Sequence 965, App
40	24	100.0	24	11	US-09-776-479-966	Sequence 966, App
41	24	100.0	24	11	US-09-776-479-967	Sequence 967, App
42	24	100.0	24	11	US-09-965-101-3	Sequence 3, Appli
43	24	100.0	24	11	US-09-965-101-66	Sequence 66, Appl
44	24	100.0	24	13	US-10-023-909A-77	Sequence 77, Appl
45	24	100.0	24	13	US-10-074-956-3	Sequence 3, Appli

ALIGNMENTS

RESULT 1
US-09-760-506-4
; Sequence 4, Application US/09760506
; Publication No. US20010034330A1
; GENERAL INFORMATION:
; APPLICANT: Kensil, Charlotte
; TITLE OF INVENTION: Innate Immunity-Stimulating Compositions of CpG and
; TITLE OF INVENTION: Saponin and Methods Thereof
; FILE REFERENCE: 8449-153-999
; CURRENT APPLICATION NUMBER: US/09/760,506
; CURRENT FILING DATE: 2002-01-12
; PRIOR APPLICATION NUMBER: 60/200,853
; PRIOR FILING DATE: 2000-05-01
; PRIOR APPLICATION NUMBER: 60/175,840
; PRIOR FILING DATE: 2000-01-13
; PRIOR APPLICATION NUMBER: 60/128,608
; PRIOR FILING DATE: 1999-04-08
; PRIOR APPLICATION NUMBER: 60/095,913
; PRIOR FILING DATE: 1998-08-10
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Motif
US-09-760-506-4

Query Match 100.0%; Score 24; DB 9; Length 24;

Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 2
US-09-768-012-4
; Sequence 4, Application US/09768012
; Patent No. US20010044416A1
; GENERAL INFORMATION:
; APPLICANT: Davis, Heather L.
; APPLICANT: McCluskie, Michael J.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for
; TITLE OF INVENTION: Inducing a Th2 Immune Response
; FILE REFERENCE: C1040/7010/HCL/MAT
; CURRENT APPLICATION NUMBER: US/09/768,012
; CURRENT FILING DATE: 2001-01-22
; PRIOR APPLICATION NUMBER: US 60/177,461
; PRIOR FILING DATE: 2000-01-20
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 4
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
; NAME/KEY: modified_base
; LOCATION: (2)...(2)
; OTHER INFORMATION: Cytosine is unmethylated.
; NAME/KEY: modified_base
; LOCATION: (5)...(5)
; OTHER INFORMATION: Cytosine is unmethylated.
; NAME/KEY: modified_base
; LOCATION: (13)...(13)
; OTHER INFORMATION: Cytosine is unmethylated.
; NAME/KEY: modified_base
; LOCATION: (21)...(21)
; OTHER INFORMATION: Cytosine is unmethylated.
US-09-768-012-4

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 3
US-09-824-468-90
; Sequence 90, Application US/09824468
; Patent No. US20020064515A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Weiner, George
; TITLE OF INVENTION: Methods and Products for Stimulating the
; TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
; TITLE OF INVENTION: Cytokines
; FILE REFERENCE: C1039/7026/HCL
; CURRENT APPLICATION NUMBER: US/09/824,468
; CURRENT FILING DATE: 2001-04-02
; PRIOR APPLICATION NUMBER: 09/286,098
; PRIOR FILING DATE: 1999-04-02
; NUMBER OF SEQ ID NOS: 105
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 90
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-824-468-90

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 4
US-09-800-266A-77
; Sequence 77, Application US/09800266A
; Patent No. US20020156033A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids and
; TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
; TITLE OF INVENTION: Cancer
; FILE REFERENCE: C1037/7017(HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/800,266A
; CURRENT FILING DATE: 2001-03-05
; PRIOR APPLICATION NUMBER: US 60/187,214
; PRIOR FILING DATE: 2000-03-03
; NUMBER OF SEQ ID NOS: 146
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-800-266A-77

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 5
US-09-895-007A-77
; Sequence 77, Application US/09895007A
; Patent No. US20020165178A1
; GENERAL INFORMATION:
; APPLICANT: Schetter, Christian
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACIDS FOR THE
; TITLE OF INVENTION: TREATMENT OF ANEMIA, THROMBOCYTOPENIA, AND NEUTROPENIA
; FILE REFERENCE: C1041/7014 (AWS)
; CURRENT APPLICATION NUMBER: US/09/895,007A
; CURRENT FILING DATE: 2001-06-28
; PRIOR APPLICATION NUMBER: US 60/214,368
; PRIOR FILING DATE: 2000-06-28
; NUMBER OF SEQ ID NOS: 133
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-09-895-007A-77

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 6
US-09-920-313-77
; Sequence 77, Application US/09920313
; Publication No. US20020198165A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Nucleic Acids for the Prevention and
; TITLE OF INVENTION: Treatment of Gastric Ulcers
; FILE REFERENCE: C1037/7019 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/920,313
; CURRENT FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 60/222,248
; PRIOR FILING DATE: 2001-08-08
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-920-313-77

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 7
US-09-920-313-147
; Sequence 147, Application US/09920313
; Publication No. US20020198165A1
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Nucleic Acids for the Prevention and
; TITLE OF INVENTION: Treatment of Gastric Ulcers
; FILE REFERENCE: C1037/7019 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/920,313
; CURRENT FILING DATE: 2001-08-01
; PRIOR APPLICATION NUMBER: US 60/222,248
; PRIOR FILING DATE: 2001-08-08
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 147
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic
US-09-920-313-147

Query Match 100.0%; Score 24; DB 9; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 8
US-09-927-422A-23
; Sequence 23, Application US/09927422A
; Publication No. US20030022852A1
; GENERAL INFORMATION:
; APPLICANT: Van Nest, Gary
; APPLICANT: Tuck, Stephen
; APPLICANT: Fearon, Karen L.
; APPLICANT: Dina, Dino
; TITLE OF INVENTION: BIODEGRADABLE IMMUNOMODULATORY
; TITLE OF INVENTION: FORMULATIONS AND METHODS FOR USE THEREOF
; FILE REFERENCE: 377882001420
; CURRENT APPLICATION NUMBER: US/09/927,422A
; CURRENT FILING DATE: 2001-08-10
; PRIOR APPLICATION NUMBER: U.S. 09/802,359
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: U.S. 60/188,30
; PRIOR FILING DATE: 2000-03-10
; NUMBER OF SEQ ID NOS: 23
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 23
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Polynucleotide containing CG
US-09-927-422A-23

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 9
US-09-888-326-729
; Sequence 729, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 729
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphorothioate backbone
US-09-888-326-729

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 10
US-09-888-326-730
; Sequence 730, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 730
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: chimeric phosphorothioate/phosphodiester backbone
; OTHER INFORMATION: with phosphorothioate at 5' and 3' ends
US-09-888-326-730

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 11
US-09-888-326-731
; Sequence 731, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 731
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphodiester backbone
US-09-888-326-731

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 12
US-09-888-326-732
; Sequence 732, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 732
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphorodithioate backbone
US-09-888-326-732

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 13
US-09-888-326-733
; Sequence 733, Application US/09888326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hartmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Cell Lysis and Treating Cancer
; FILE REFERENCE: C1039/7052 (AWS)
; CURRENT APPLICATION NUMBER: US/09/888,326
; CURRENT FILING DATE: 2001-06-22
; PRIOR APPLICATION NUMBER: US 60/213,346
; PRIOR FILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 733
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
; NAME/KEY: misc_feature
; LOCATION: (0)...(0)
; OTHER INFORMATION: phosphodiester backbone
; NAME/KEY: misc_feature
; LOCATION: (24)...(24)
; OTHER INFORMATION: biotinylated at 3' end
US-09-888-326-733

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

```
                    ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 14
US-09-931-583-29
; Sequence 29, Application US/09931583
; Publication No. US20030050263A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur
; APPLICANT: Klinman, Dennis
; APPLICANT: Steinberg, Alfred
; TITLE OF INVENTION: Methods and Products for Treating HIV Infection
; FILE REFERENCE: C1039/7053(HCL)
; CURRENT APPLICATION NUMBER: US/09/931,583
; CURRENT FILING DATE: 2001-08-16
; PRIOR APPLICATION NUMBER: US 08/276,358
; PRIOR FILING DATE: 1994-07-15
; PRIOR APPLICATION NUMBER: US 09/415,142
; PRIOR FILING DATE: 1999-10-09
; NUMBER OF SEQ ID NOS: 75
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 29
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-931-583-29

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 15
US-09-931-583-38
; Sequence 38, Application US/09931583
; Publication No. US20030050263A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur
; APPLICANT: Klinman, Dennis
; APPLICANT: Steinberg, Alfred
; TITLE OF INVENTION: Methods and Products for Treating HIV Infection
; FILE REFERENCE: C1039/7053(HCL)
; CURRENT APPLICATION NUMBER: US/09/931,583
; CURRENT FILING DATE: 2001-08-16
; PRIOR APPLICATION NUMBER: US 08/276,358
; PRIOR FILING DATE: 1994-07-15
; PRIOR APPLICATION NUMBER: US 09/415,142
; PRIOR FILING DATE: 1999-10-09
; NUMBER OF SEQ ID NOS: 75
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 38
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-931-583-38

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.6;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	24	100.0	24	1	PCT-US00-02413-5	Sequence 5, Appli
2	24	100.0	24	1	PCT-US00-02413-7	Sequence 7, Appli
3	24	100.0	24	1	PCT-US00-02413-17	Sequence 17, Appl
4	24	100.0	24	1	PCT-US02-20676-5	Sequence 5, Appli
5	24	100.0	24	1	PCT-US02-24410A-1	Sequence 1, Appli
6	24	100.0	24	1	PCT-US02-26468-39	Sequence 39, Appl
7	24	100.0	24	1	PCT-US02-31460-15	Sequence 15, Appl
8	24	100.0	24	1	PCT-US02-31460-36	Sequence 36, Appl
9	24	100.0	24	1	PCT-US02-31460-37	Sequence 37, Appl
10	24	100.0	24	1	PCT-US02-33051A-1	Sequence 1, Appli
11	24	100.0	24	1	PCT-US97-19791-46	Sequence 46, Appl
12	24	100.0	24	1	PCT-US99-09863-77	Sequence 77, Appl
13	24	100.0	24	2	PCT-US03-04711A-2	Sequence 2, Appli
14	24	100.0	24	2	PCT-US03-04711A-3	Sequence 3, Appli
15	24	100.0	24	2	PCT-US03-05000A-17	Sequence 17, Appl
16	24	100.0	24	2	PCT-US03-17733-25	Sequence 25, Appl
17	24	100.0	24	2	PCT-US03-17733-27	Sequence 27, Appl
18	24	100.0	24	2	PCT-US03-21113-2	Sequence 2, Appli
19	24	100.0	24	2	PCT-US03-25935-59	Sequence 59, Appl
20	24	100.0	24	2	PCT-US03-25935-105	Sequence 105, App
21	24	100.0	24	2	PCT-US03-25935-106	Sequence 106, App
22	24	100.0	24	2	PCT-US03-25935-107	Sequence 107, App
23	24	100.0	24	2	PCT-US03-25935-108	Sequence 108, App
24	24	100.0	24	2	PCT-US03-25935-109	Sequence 109, App
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28	24	100.0	24	2	PCT-US03-25935-113	Sequence 113, App
29	24	100.0	24	2	PCT-US03-25935-114	Sequence 114, App
30	24	100.0	24	2	PCT-US03-25935-115	Sequence 115, App
31	24	100.0	24	2	PCT-US03-25935-116	Sequence 116, App
32	24	100.0	24	2	PCT-US03-25935-117	Sequence 117, App
33	24	100.0	24	2	PCT-US03-25935-118	Sequence 118, App
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42	24	100.0	24	2	PCT-US03-25935-127	Sequence 127, App
43	24	100.0	24	2	PCT-US03-25935-128	Sequence 128, App
44	24	100.0	24	2	PCT-US03-25935-129	Sequence 129, App
45	24	100.0	24	2	PCT-US03-25935-130	Sequence 130, App

ALIGNMENTS

RESULT 1
PCT-US00-02413-5
; Sequence 5, Application PC/TUS0002413
; GENERAL INFORMATION:
; APPLICANT: Virginia Commonwealth University
; APPLICANT: BioCache Pharmaceuticals, LLC
; TITLE OF INVENTION: Advanced Antigen Presentation Platform
; FILE REFERENCE: 05270001ta
; CURRENT APPLICATION NUMBER: PCT/US00/02413
; CURRENT FILING DATE: 2000-02-02
; PRIOR APPLICATION NUMBER: US 60/118,526
; PRIOR FILING DATE: 1999-02-02
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: immunostimulating oligonucleotides
PCT-US00-02413-5

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 2
PCT-US00-02413-7
; Sequence 7, Application PC/TUS0002413
; GENERAL INFORMATION:
; APPLICANT: Virginia Commonwealth University
; APPLICANT: BioCache Pharmaceuticals, LLC
; TITLE OF INVENTION: Advanced Antigen Presentation Platform
; FILE REFERENCE: 05270001ta
; CURRENT APPLICATION NUMBER: PCT/US00/02413
; CURRENT FILING DATE: 2000-02-02
; PRIOR APPLICATION NUMBER: US 60/118,526
; PRIOR FILING DATE: 1999-02-02
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: immunostimulating oligonucleotides
PCT-US00-02413-7

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 3
PCT-US00-02413-17
; Sequence 17, Application PC/TUS0002413
; GENERAL INFORMATION:
; APPLICANT: Virginia Commonwealth University
; APPLICANT: BioCache Pharmaceuticals, LLC
; TITLE OF INVENTION: Advanced Antigen Presentation Platform
; FILE REFERENCE: 05270001ta
; CURRENT APPLICATION NUMBER: PCT/US00/02413

; CURRENT FILING DATE: 2000-02-02
; PRIOR APPLICATION NUMBER: US 60/118,526
; PRIOR FILING DATE: 1999-02-02
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 17
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: immunostimulating oligonucleotides
PCT-US00-02413-17

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 4
PCT-US02-20676-5
; Sequence 5, Application PC/TUS0220676
; GENERAL INFORMATION:
; APPLICANT: CHIRON CORPORATION
; TITLE OF INVENTION: HCV E1E2 VACCINE COMPOSITIONS
; FILE REFERENCE: 2302-17206.40
; CURRENT APPLICATION NUMBER: PCT/US02/20676
; CURRENT FILING DATE: 2002-06-28
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: CpG oligonucleotide
PCT-US02-20676-5

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 5
PCT-US02-24410A-1
; Sequence 1, Application PC/TUS0224410A
; GENERAL INFORMATION:
; APPLICANT: Coley Pharmaceutical GmbH
; APPLICANT: Max-Delbruck Centrum fur Molekulare Medizin
; TITLE OF INVENTION: Methods and Compositions Relating to
; TITLE OF INVENTION: Plasmacytoid Dendritic Cells
; FILE REFERENCE: C01041.70029
; CURRENT APPLICATION NUMBER: PCT/US02/24410A
; CURRENT FILING DATE: 2002-08-01
; PRIOR APPLICATION NUMBER: US 60/309,260
; PRIOR FILING DATE: 2001-08-01
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; NAME/KEY:
; LOCATION:
; OTHER INFORMATION: Synthetic Oligonucleotide
PCT-US02-24410A-1

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 6
PCT-US02-26468-39
; Sequence 39, Application PC/TUS0226468
; GENERAL INFORMATION:
; APPLICANT: Coley Pharmaceutical Group Inc.
; APPLICANT: Coley Pharmaceutical GmbH
; APPLICANT: University of Iowa Research Foundation
; TITLE OF INVENTION: Combination Motif Immune Stimulatory Oligonucleotides with Improv
; TITLE OF INVENTION: Activity
; FILE REFERENCE: C01039/70063WO (HCL/AWS)
; CURRENT APPLICATION NUMBER: PCT/US02/26468
; CURRENT FILING DATE: 2002-08-19
; PRIOR APPLICATION NUMBER: US 60/313,273
; PRIOR FILING DATE: 2001-08-17
; PRIOR APPLICATION NUMBER: US 60/393,952
; PRIOR FILING DATE: 2002-07-03
; NUMBER OF SEQ ID NOS: 81
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 39
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
PCT-US02-26468-39

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 7
PCT-US02-31460-15
; Sequence 15, Application PC/TUS0231460
; GENERAL INFORMATION:
; APPLICANT: Coley Pharmaceutical GmbH
; TITLE OF INVENTION: TOLL-LIKE RECEPTOR 3 SIGNALING AGONISTS AND ANTAGONISTS
; FILE REFERENCE: C01041.70031
; CURRENT APPLICATION NUMBER: PCT/US02/31460
; CURRENT FILING DATE: 2002-10-03
; NUMBER OF SEQ ID NOS: 117
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 15
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
PCT-US02-31460-15

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 8
PCT-US02-31460-36
; Sequence 36, Application PC/TUS0231460
; GENERAL INFORMATION:
; APPLICANT: Coley Pharmaceutical GmbH
; TITLE OF INVENTION: TOLL-LIKE RECEPTOR 3 SIGNALING AGONISTS AND ANTAGONISTS
; FILE REFERENCE: C01041.70031
; CURRENT APPLICATION NUMBER: PCT/US02/31460
; CURRENT FILING DATE: 2002-10-03
; NUMBER OF SEQ ID NOS: 117
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 36
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
PCT-US02-31460-36

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 9
PCT-US02-31460-37
; Sequence 37, Application PC/TUS0231460
; GENERAL INFORMATION:
; APPLICANT: Coley Pharmaceutical GmbH
; TITLE OF INVENTION: TOLL-LIKE RECEPTOR 3 SIGNALING AGONISTS AND ANTAGONISTS
; FILE REFERENCE: C01041.70031
; CURRENT APPLICATION NUMBER: PCT/US02/31460
; CURRENT FILING DATE: 2002-10-03
; NUMBER OF SEQ ID NOS: 117
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 37
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
PCT-US02-31460-37

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 10
PCT-US02-33051A-1
; Sequence 1, Application PC/TUS0233051A
; GENERAL INFORMATION:
; APPLICANT: University of Iowa Research Foundation
; APPLICANT: Coley Pharmaceutical GmbH
; APPLICANT: Coley Pharmaceutical Group, Inc.
; TITLE OF INVENTION: METHODS AND PRODUCTS FOR ENHANCING IMMUNE RESPONSES USING
; TITLE OF INVENTION: IMIDAZOQUINOLINE COMPOUNDS
; FILE REFERENCE: C01039.70065.WO
; CURRENT APPLICATION NUMBER: PCT/US02/33051A
; CURRENT FILING DATE: 2002-10-15
; PRIOR APPLICATION NUMBER: 60/329,208
; PRIOR FILING DATE: 2001-10-12
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic
PCT-US02-33051A-1

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 11
PCT-US97-19791-46
; Sequence 46, Application PC/TUS9719791
; GENERAL INFORMATION:
; APPLICANT: University of Iowa Research Foundation
; TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID
; TITLE OF INVENTION: MOLECULES
; NUMBER OF SEQUENCES: 111
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII text
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US97/19791
; FILING DATE: 30-October-1997
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: U.S. Serial No. 08/738,652
; FILING DATE: October 30, 1996
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Haile, Lisa A.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 08918/012001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619/678-5070
; TELEFAX: 619/678-5099
; INFORMATION FOR SEQ ID NO: 46:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 24 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
PCT-US97-19791-46

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 12
PCT-US99-09863-77

; Sequence 77, Application PC/TUS9909863
; GENERAL INFORMATION:
; APPLICANT: University of Iowa Research Foundation
; APPLICANT: Ottawa Civic Hospital Loeb Research Institute
; APPLICANT: United States of America as represented by the Secretary of the Navy
; TITLE OF INVENTION: Methods for the Prevention and Treatment
; TITLE OF INVENTION: of Parasitic Infections and Related Diseases Using CpG
; TITLE OF INVENTION: Oligonucleotides
; FILE REFERENCE: C1039/7027WO/HCL
; CURRENT APPLICATION NUMBER: PCT/US99/09863
; CURRENT FILING DATE: 1999-05-06
; EARLIER APPLICATION NUMBER: US 60/084,512
; EARLIER FILING DATE: 1998-05-06
; NUMBER OF SEQ ID NOS: 92
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 77
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
PCT-US99-09863-77

Query Match 100.0%; Score 24; DB 1; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 13
PCT-US03-04711A-2
; Sequence 2, Application PC/TUS0304711A
; GENERAL INFORMATION:
; APPLICANT: Sokoll, Kenneth K.
; TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
; FILE REFERENCE: Immunogen Delivery System
; CURRENT APPLICATION NUMBER: PCT/US03/04711A
; CURRENT FILING DATE: 2003-04-04
; PRIOR APPLICATION NUMBER: US 10/076674
; PRIOR FILING DATE: 2002-02-14
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
PCT-US03-04711A-2

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 14
PCT-US03-04711A-3
; Sequence 3, Application PC/TUS0304711A
; GENERAL INFORMATION:
; APPLICANT: Sokoll, Kenneth K.
; TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
; FILE REFERENCE: Immunogen Delivery System
; CURRENT APPLICATION NUMBER: PCT/US03/04711A
; CURRENT FILING DATE: 2003-04-04
; PRIOR APPLICATION NUMBER: US 10/076674
; PRIOR FILING DATE: 2002-02-14
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide
PCT-US03-04711A-3

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 15
PCT-US03-05000A-17
; Sequence 17, Application PC/TUS0305000A
; GENERAL INFORMATION:
; APPLICANT: Syntherica Corporation
; APPLICANT: Friedman, Steve
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR SURROGATE
; TITLE OF INVENTION: ANTIBODY MODULATION OF AN IMMUNE RESPONSE AND TRANSPORT
; FILE REFERENCE: 35796/259000
; CURRENT APPLICATION NUMBER: PCT/US03/05000A
; CURRENT FILING DATE: 2003-02-19
; PRIOR APPLICATION NUMBER: 60/358,459
; PRIOR FILING DATE: 2002-02-19
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Immunomodulatory nucleic acid motif.
PCT-US03-05000A-17

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 15;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

Search completed: August 5, 2005, 07:11:42
Job time : 2756 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 03:27:26 ; Search time 7425 Seconds
(without alignments)
40.982 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 21945288 seqs, 6339366203 residues

Total number of hits satisfying chosen parameters: 43890576

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Pending_Patents_NA_New:*
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2: /cgn2_6/ptodata/2/pna/PCT_NEW_COMB.seq2:*
3: /cgn2_6/ptodata/2/pna/US06_NEW_COMB.seq:*
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5: /cgn2_6/ptodata/2/pna/US08_NEW_COMB.seq:*
6: /cgn2_6/ptodata/2/pna/US09_NEW_COMB.seq:*
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16: /cgn2_6/ptodata/2/pna/US10_NEW_COMB.seq8:*
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22: /cgn2_6/ptodata/2/pna/US11_NEW_COMB.seq5:*
23: /cgn2_6/ptodata/2/pna/US60_NEW_COMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	24	100.0	24	2	PCT-US05-02594-2	Sequence 2, Appli
2	24	100.0	24	8	US-10-497-591A-22	Sequence 22, Appl
3	24	100.0	24	8	US-10-492-002-77	Sequence 77, Appl
4	24	100.0	24	8	US-10-371-116C-10	Sequence 10, Appl
5	24	100.0	24	10	US-10-873-853A-17	Sequence 17, Appl
6	24	100.0	24	11	US-10-526-060-65	Sequence 65, Appl
7	24	100.0	24	11	US-10-526-151-47	Sequence 47, Appl
8	24	100.0	24	11	US-10-963-999-7	Sequence 7, Appli
9	24	100.0	24	11	US-10-529-931-27	Sequence 27, Appl
10	24	100.0	24	18	US-11-183-253-2	Sequence 2, Appli
11	24	100.0	24	18	US-11-183-253-8	Sequence 8, Appli
12	24	100.0	24	18	US-11-179-008-2	Sequence 2, Appli
13	24	100.0	24	18	US-11-179-008-108	Sequence 108, App
14	24	100.0	24	18	US-11-179-008-147	Sequence 147, App
15	24	100.0	24	19	US-11-021-821-2	Sequence 2, Appli
16	24	100.0	24	19	US-11-041-636-8	Sequence 8, Appli
17	24	100.0	24	19	US-11-056-463-2	Sequence 2, Appli
18	24	100.0	24	19	US-11-056-463-108	Sequence 108, App
19	24	100.0	24	19	US-11-056-463-147	Sequence 147, App
20	24	100.0	24	19	US-11-061-140-285	Sequence 285, App
21	24	100.0	24	19	US-11-061-140-334	Sequence 334, App
22	24	100.0	24	19	US-11-071-836-46	Sequence 46, Appl
23	24	100.0	24	22	US-11-084-777-112	Sequence 112, App
24	24	100.0	24	22	US-11-084-777-128	Sequence 128, App
25	24	100.0	24	22	US-11-099-683-54	Sequence 54, Appl
26	24	100.0	24	22	US-11-110-189-90	Sequence 90, Appl
27	24	100.0	24	22	US-11-127-654-238	Sequence 238, App
28	24	100.0	24	22	US-11-127-654-253	Sequence 253, App
29	24	100.0	24	22	US-11-127-654-290	Sequence 290, App
30	24	100.0	24	22	US-11-127-654-294	Sequence 294, App
31	24	100.0	24	22	US-11-127-654-341	Sequence 341, App
32	24	100.0	24	22	US-11-127-654-343	Sequence 343, App
33	24	100.0	24	22	US-11-127-654-347	Sequence 347, App
34	24	100.0	24	22	US-11-127-654-399	Sequence 399, App
35	24	100.0	24	22	US-11-127-654-922	Sequence 922, App
36	24	100.0	24	22	US-11-014-351-1	Sequence 1, Appli
37	24	100.0	24	22	US-11-154-324-5	Sequence 5, Appli
38	24	100.0	24	23	US-60-655-931-57	Sequence 57, Appl
39	24	100.0	24	23	US-60-655-931-59	Sequence 59, Appl
40	24	100.0	24	23	US-60-655-931-105	Sequence 105, App
41	24	100.0	24	23	US-60-655-931-106	Sequence 106, App
42	24	100.0	24	23	US-60-655-931-107	Sequence 107, App
43	24	100.0	24	23	US-60-655-931-108	Sequence 108, App
44	24	100.0	24	23	US-60-655-931-109	Sequence 109, App
45	24	100.0	24	23	US-60-655-931-110	Sequence 110, App

ALIGNMENTS

RESULT 1
PCT-US05-02594-2
; Sequence 2, Application PC/TUS0502594
; GENERAL INFORMATION:
; APPLICANT: RAZ, EYAL
; APPLICANT: RACHMILEWITZ, DANIEL
; TITLE OF INVENTION: METHODS FOR TREATING IRRITABLE BOWEL
; TITLE OF INVENTION: SYNDROME
; FILE REFERENCE: UCAL-314WO
; CURRENT APPLICATION NUMBER: PCT/US05/02594
; CURRENT FILING DATE: 2005-01-27
; PRIOR APPLICATION NUMBER: 60/541,861
; PRIOR FILING DATE: 2004-02-03
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: chemically synthesized oligonucleotide
PCT-US05-02594-2

Query Match 100.0%; Score 24; DB 2; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 TCGTCGTTTTGTCGTTTTGTCGTT 24
||||||||||||||||||||||||
Db 1 TCGTCGTTTTGTCGTTTTGTCGTT 24

RESULT 2

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US-10-497-591A-22
; Sequence 22, Application US/10497591A
; GENERAL INFORMATION:
;  APPLICANT: SCHMIDT, WALTER
;  APPLICANT:  SCHELLACK, CAROLA
;  APPLICANT:  EGYED, ALENA
;  APPLICANT:  LINGNAU, KAREN
;  TITLE OF INVENTION: IMMUNOSTIMULATORY OLIGODEOXYNUCLEOTIDES
;  FILE REFERENCE: SONN:045US
;  CURRENT APPLICATION NUMBER: US/10/497,591A
;  CURRENT FILING DATE:  2004-06-03
;  PRIOR APPLICATION NUMBER: PCT/EP02/13791
;  PRIOR FILING DATE: 2002-12-05
;  PRIOR APPLICATION NUMBER: A 1924/2001
;  PRIOR FILING DATE: 2001-12-07
;  NUMBER OF SEQ ID NOS: 113
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 22
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:  Synthetic
;   OTHER INFORMATION: Primer
US-10-497-591A-22

  Query Match             100.0%;  Score 24;  DB 8;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 3
US-10-492-002-77
; Sequence 77, Application US/10492002
; GENERAL INFORMATION:
;  APPLICANT: QIAGEN GmbH
;  TITLE OF INVENTION: CPG FORMULATIONS AND RELATED METHODS
;  FILE REFERENCE: PA098-PCT
;  CURRENT APPLICATION NUMBER: US/10/492,002
;  CURRENT FILING DATE:  2004-04-06
;  PRIOR APPLICATION NUMBER: US 60/327,734
;  PRIOR FILING DATE: 2001-10-06
;  NUMBER OF SEQ ID NOS: 154
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 77
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Homo sapiens
US-10-492-002-77

  Query Match             100.0%;  Score 24;  DB 8;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 4
US-10-371-116C-10
; Sequence 10, Application US/10371116C
; GENERAL INFORMATION:
;  APPLICANT: Cohen, Irun R
;  APPLICANT:  Quintana, Francisco
;  TITLE OF INVENTION: METHODS OF TREATMENT OR PREVENTION OF AUTOIMMUNE DISEASES WITH
;  TITLE OF INVENTION:  CpG-CONTAINING POLYNUCLEOTIDE
;  FILE REFERENCE: 87534-3900
;  CURRENT APPLICATION NUMBER: US/10/371,116C
;  CURRENT FILING DATE:  2003-02-24
;  PRIOR APPLICATION NUMBER: US 60/227,853
;  PRIOR FILING DATE: 2000-08-25
;  NUMBER OF SEQ ID NOS: 11
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 10
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-10-371-116C-10

  Query Match             100.0%;  Score 24;  DB 8;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 5
US-10-873-853A-17
; Sequence 17, Application US/10873853A
; GENERAL INFORMATION:
;  APPLICANT: Diener, John
;  APPLICANT:  Epstein, David
;  APPLICANT:  Ferguson, Alicia
;  APPLICANT:  Grate, Dilara
;  APPLICANT:  Keefe, Anthony
;  APPLICANT:  McCauley, Thomas
;  APPLICANT:  Preiss, Jeffrey
;  APPLICANT:  Stanton, Martin
;  APPLICANT:  Wilson, Charles
;  TITLE OF INVENTION: Stabilized Aptamers to Platelet Derived Growth Factor and Their
;  TITLE OF INVENTION:  Use as Oncology Therapeutics
;  FILE REFERENCE: 23239-558A CIP
;  CURRENT APPLICATION NUMBER: US/10/873,853A
;  CURRENT FILING DATE:  2004-06-21
;  PRIOR APPLICATION NUMBER: 10/829,504
;  PRIOR FILING DATE: 2004-04-21
;  PRIOR APPLICATION NUMBER: 10/762,915
;  PRIOR FILING DATE: 2004-01-21
;  PRIOR APPLICATION NUMBER: 10/718,833
;  PRIOR FILING DATE: 2003-11-21
;  PRIOR APPLICATION NUMBER: 60/441,357
;  PRIOR FILING DATE: 2003-01-21
;  PRIOR APPLICATION NUMBER: 60/463,095
;  PRIOR FILING DATE: 2003-04-15
;  PRIOR APPLICATION NUMBER: 60/428,102
;  PRIOR FILING DATE: 2002-11-21
;  PRIOR APPLICATION NUMBER: 60/464,179
;  PRIOR FILING DATE: 2003-04-21
;  PRIOR APPLICATION NUMBER: 60/465,055
;  PRIOR FILING DATE: 2003-04-23
;  PRIOR APPLICATION NUMBER: 60/512,071
;  PRIOR FILING DATE: 2003-10-17
;  PRIOR APPLICATION NUMBER: 60/537,201
;  PRIOR FILING DATE: 2004-01-16
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 85
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 17
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: artificial
;   FEATURE:
;   OTHER INFORMATION: synthetic aptamer
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(24)
;   OTHER INFORMATION: phosphorothioate backbone
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US-10-873-853A-17

Query Match 100.0%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 6
US-10-526-060-65
; Sequence 65, Application US/10526060
; GENERAL INFORMATION:
; APPLICANT: ASHMAN, Claire
; APPLICANT: ELLIS, Jonathan Henry
; TITLE OF INVENTION: IMMUNOGENIC COMPOSITION COMPRISING AN
; TITLE OF INVENTION: IL-13 ELEMENT AND T CELL EPITOPES, AND ITS THERAPEUTIC USE
; FILE REFERENCE: PG4938
; CURRENT APPLICATION NUMBER: US/10/526,060
; CURRENT FILING DATE: 2005-02-28
; PRIOR APPLICATION NUMBER: PCT/GB03/03703
; PRIOR FILING DATE: 2003-08-28
; PRIOR APPLICATION NUMBER: GB 0304672.9
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: GB 0220212.5
; PRIOR FILING DATE: 2002-08-30
; NUMBER OF SEQ ID NOS: 68
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 65
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Homo sapien
US-10-526-060-65

Query Match 100.0%; Score 24; DB 11; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
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RESULT 7
US-10-526-151-47
; Sequence 47, Application US/10526151
; GENERAL INFORMATION:
; APPLICANT: ASHMAN, Claire
; APPLICANT: ELLIS, Jonathan Henry
; TITLE OF INVENTION: VACCINE COMPRISING IL-13 AND AN ADJUVANT
; FILE REFERENCE: PG4939A
; CURRENT APPLICATION NUMBER: US/10/526,151
; CURRENT FILING DATE: 2005-02-28
; PRIOR APPLICATION NUMBER: PCT/GB03/003721
; PRIOR FILING DATE: 2003-08-28
; PRIOR APPLICATION NUMBER: GB 0304672.9
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: GB 0220211.7
; PRIOR FILING DATE: 2002-08-30
; NUMBER OF SEQ ID NOS: 68
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 47
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: artificial immunostimulatory oligonucleotide
US-10-526-151-47

Query Match 100.0%; Score 24; DB 11; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 8
US-10-963-999-7
; Sequence 7, Application US/10963999
; GENERAL INFORMATION:
; APPLICANT: Tam, Ying K.
; APPLICANT: Chikh, Ghania
; APPLICANT: Sekirov, Laura
; APPLICANT: Brodsky, Irina
; APPLICANT: Raney, Sameersingh G.
; TITLE OF INVENTION: Methods and Compositions for Enhancing Innate Immunity and
; TITLE OF INVENTION: Antibody Dependent Cellular Cytotoxicity
; FILE REFERENCE: 33687/US/3 (454892-00056)
; CURRENT APPLICATION NUMBER: US/10/963,999
; CURRENT FILING DATE: 2004-10-12
; PRIOR APPLICATION NUMBER: US 60/616,161
; PRIOR FILING DATE: 2004-10-04
; PRIOR APPLICATION NUMBER: US 60/542,754
; PRIOR FILING DATE: 2004-02-06
; PRIOR APPLICATION NUMBER: US 60/510,799
; PRIOR FILING DATE: 2003-10-11
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 7
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: Synthetic
US-10-963-999-7

Query Match 100.0%; Score 24; DB 11; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 9
US-10-529-931-27
; Sequence 27, Application US/10529931
; GENERAL INFORMATION:
; APPLICANT: Glaxo Group Limited
; TITLE OF INVENTION: Vaccine
; FILE REFERENCE: PG4961
; CURRENT APPLICATION NUMBER: US/10/529,931
; CURRENT FILING DATE: 2005-03-31
; PRIOR APPLICATION NUMBER: GB 0222953.2
; PRIOR FILING DATE: 2002-10-03
; NUMBER OF SEQ ID NOS: 28
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 27
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Immunostimulatory oligonucleotide
US-10-529-931-27

Query Match 100.0%; Score 24; DB 11; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
```

```
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 10
US-11-183-253-2
; Sequence 2, Application US/11183253
; GENERAL INFORMATION:
;  APPLICANT: Ahluwalia, Navneet K.
;  APPLICANT:  Efler, Susan M.
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Vollmer, Joerg
;  TITLE OF INVENTION: METHODS AND PRODUCTS RELATED TO TREATMENT AND PREVENTION OF
;  TITLE OF INVENTION:  HEPATITIS C VIRUS INFECTION
;  FILE REFERENCE: C1037.70035US02
;  CURRENT APPLICATION NUMBER: US/11/183,253
;  CURRENT FILING DATE:  2005-07-15
;  PRIOR APPLICATION NUMBER: US 10/532,746
;  PRIOR FILING DATE: 2005-04-26
;  PRIOR APPLICATION NUMBER: PCT/IB2003/005520
;  PRIOR FILING DATE: 2003-10-29
;  PRIOR APPLICATION NUMBER: US 60/421,987
;  PRIOR FILING DATE: 2002-10-29
;  NUMBER OF SEQ ID NOS: 32
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-11-183-253-2

  Query Match             100.0%;  Score 24;  DB 18;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 11
US-11-183-253-8
; Sequence 8, Application US/11183253
; GENERAL INFORMATION:
;  APPLICANT: Ahluwalia, Navneet K.
;  APPLICANT:  Efler, Susan M.
;  APPLICANT:  Davis, Heather L.
;  APPLICANT:  Vollmer, Joerg
;  TITLE OF INVENTION: METHODS AND PRODUCTS RELATED TO TREATMENT AND PREVENTION OF
;  TITLE OF INVENTION:  HEPATITIS C VIRUS INFECTION
;  FILE REFERENCE: C1037.70035US02
;  CURRENT APPLICATION NUMBER: US/11/183,253
;  CURRENT FILING DATE:  2005-07-15
;  PRIOR APPLICATION NUMBER: US 10/532,746
;  PRIOR FILING DATE: 2005-04-26
;  PRIOR APPLICATION NUMBER: PCT/IB2003/005520
;  PRIOR FILING DATE: 2003-10-29
;  PRIOR APPLICATION NUMBER: US 60/421,987
;  PRIOR FILING DATE: 2002-10-29
;  NUMBER OF SEQ ID NOS: 32
;  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 8
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic oligonucleotide
US-11-183-253-8

  Query Match             100.0%;  Score 24;  DB 18;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 12
US-11-179-008-2
; Sequence 2, Application US/11179008
; GENERAL INFORMATION:
;  APPLICANT: Hartmann, Gunther
;  APPLICANT:  Bratzler, Robert L.
;  APPLICANT:  Krieg, Arthur
;  TITLE OF INVENTION: Methods Related to Immunostimulatory
;  TITLE OF INVENTION:  Nucleic Acid-Induced Interferon
;  FILE REFERENCE: C1039.70044US02
;  CURRENT APPLICATION NUMBER: US/11/179,008
;  CURRENT FILING DATE:  2005-07-08
;  PRIOR APPLICATION NUMBER: US 09/672,126
;  PRIOR FILING DATE: 2000-09-27
;  PRIOR APPLICATION NUMBER: US 60/156,147
;  PRIOR FILING DATE: 1999-09-27
;  NUMBER OF SEQ ID NOS: 169
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 2
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)...(24)
;   OTHER INFORMATION: Backbone has phosphorothioate linkages.
US-11-179-008-2

  Query Match             100.0%;  Score 24;  DB 18;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
  Matches   24;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24


RESULT 13
US-11-179-008-108
; Sequence 108, Application US/11179008
; GENERAL INFORMATION:
;  APPLICANT: Hartmann, Gunther
;  APPLICANT:  Bratzler, Robert L.
;  APPLICANT:  Krieg, Arthur
;  TITLE OF INVENTION: Methods Related to Immunostimulatory
;  TITLE OF INVENTION:  Nucleic Acid-Induced Interferon
;  FILE REFERENCE: C1039.70044US02
;  CURRENT APPLICATION NUMBER: US/11/179,008
;  CURRENT FILING DATE:  2005-07-08
;  PRIOR APPLICATION NUMBER: US 09/672,126
;  PRIOR FILING DATE: 2000-09-27
;  PRIOR APPLICATION NUMBER: US 60/156,147
;  PRIOR FILING DATE: 1999-09-27
;  NUMBER OF SEQ ID NOS: 169
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 108
;   LENGTH: 24
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic Oligonucleotide
US-11-179-008-108

  Query Match             100.0%;  Score 24;  DB 18;  Length 24;
  Best Local Similarity   100.0%;  Pred. No. 3.8;
```

Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 14
US-11-179-008-147
; Sequence 147, Application US/11179008
; GENERAL INFORMATION:
; APPLICANT: Hartmann, Gunther
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Krieg, Arthur
; TITLE OF INVENTION: Methods Related to Immunostimulatory
; TITLE OF INVENTION: Nucleic Acid-Induced Interferon
; FILE REFERENCE: C1039.70044US02
; CURRENT APPLICATION NUMBER: US/11/179,008
; CURRENT FILING DATE: 2005-07-08
; PRIOR APPLICATION NUMBER: US 09/672,126
; PRIOR FILING DATE: 2000-09-27
; PRIOR APPLICATION NUMBER: US 60/156,147
; PRIOR FILING DATE: 1999-09-27
; NUMBER OF SEQ ID NOS: 169
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 147
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)...(24)
; OTHER INFORMATION: Backbone has phosphorothioate linkages.
US-11-179-008-147

Query Match 100.0%; Score 24; DB 18; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

RESULT 15
US-11-021-821-2
; Sequence 2, Application US/11021821
; GENERAL INFORMATION:
; APPLICANT: RAZ, EYAL
; APPLICANT: FIERER, JOSHUA
; TITLE OF INVENTION: IMMUNOGENIC COMPOSITIONS AND METHODS OF
; TITLE OF INVENTION: USE THEREOF
; FILE REFERENCE: UCAL-311
; CURRENT APPLICATION NUMBER: US/11/021,821
; CURRENT FILING DATE: 2004-12-22
; PRIOR APPLICATION NUMBER: 60/532,786
; PRIOR FILING DATE: 2003-12-23
; PRIOR APPLICATION NUMBER: 60/564,913
; PRIOR FILING DATE: 2004-04-22
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 24
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: chemically synthesized
US-11-021-821-2

Query Match 100.0%; Score 24; DB 19; Length 24;
Best Local Similarity 100.0%; Pred. No. 3.8;

Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||||||||||||||||
Db          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
```

Search completed: August 5, 2005, 09:15:38
Job time : 7429 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: August 5, 2005, 00:46:40 ; Search time 8390 Seconds
(without alignments)
108.885 Million cell updates/sec

Title: US-09-888-326A-729
Perfect score: 24
Sequence: 1 tcgtcgttttgtcgttttgtcgtt 24

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 34239544 seqs, 19032134700 residues

Total number of hits satisfying chosen parameters: 68479088

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : EST:*
1: gb_est1:*
2: gb_est2:*
3: gb_htc:*
4: gb_est3:*
5: gb_est4:*
6: gb_est5:*
7: gb_est6:*
8: gb_gss1:*
9: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
c	1	20.8	86.7	366	1	AU286121	AU286121 AU286121
	2	20.8	86.7	367	1	AU287428	AU287428 AU287428
	3	20.8	86.7	1084	2	BF139348	BF139348 601785206
c	4	20.4	85.0	669	4	BI736003	BI736003 603359133
c	5	20.4	85.0	936	2	BF142544	BF142544 601789246
	6	19.8	82.5	785	8	BH543978	BH543978 BOGYN73TF
	7	19.8	82.5	850	8	AZ183817	AZ183817 SP_1002_A
	8	19.8	82.5	916	9	AG337367	AG337367 Mus muscu
	9	19.4	80.8	613	8	AZ199737	AZ199737 SP_1040_A
c	10	19.4	80.8	705	5	BU475840	BU475840 603469578
	11	19.2	80.0	317	4	BI451665	BI451665 ro57f03.y
	12	19.2	80.0	322	4	BI748907	BI748907 ro83f02.y
	13	19.2	80.0	330	7	CO902262	CO902262 Mdfrt3057
	14	19.2	80.0	335	4	BI396890	BI396890 ro63b08.y
c	15	19.2	80.0	437	8	CC084807	CC084807 CSU-K33r.
c	16	19.2	80.0	440	4	BG687461	BG687461 602639432
c	17	19.2	80.0	442	7	CN959427	CN959427 6927_1001
	18	19.2	80.0	472	7	CN492399	CN492399 Mdfw20131
c	19	19.2	80.0	523	4	BG789225	BG789225 SEAUMC009
	20	19.2	80.0	536	7	CV511132	CV511132 kc67e04.y
	21	19.2	80.0	550	7	CO752082	CO752082 Mdfrt3053
	22	19.2	80.0	556	9	CR343225	CR343225 Medicago
c	23	19.2	80.0	572	8	CC076504	CC076504 CSU-K33r.
	24	19.2	80.0	603	7	CN489009	CN489009 Mdfw2018k
c	25	19.2	80.0	702	9	CG133017	CG133017 PUFYB33TD
c	26	19.2	80.0	712	8	BH965008	BH965008 odj25f11.
c	27	19.2	80.0	728	8	CC071994	CC071994 CSU-K33r.
c	28	19.2	80.0	764	4	BI655102	BI655102 603282794
c	29	19.2	80.0	802	8	CC075673	CC075673 CSU-K33r.
c	30	19.2	80.0	887	9	CL689465	CL689465 PRI0151b_
c	31	19.2	80.0	908	4	BG175271	BG175271 602337608
	32	19.2	80.0	936	9	CG928748	CG928748 MBELE23TR
	33	19.2	80.0	1011	2	BE380969	BE380969 601271506
c	34	19.2	80.0	1033	4	BG962668	BG962668 602830075
c	35	19.2	80.0	1158	4	BI734203	BI734203 603351303
c	36	19.2	80.0	1194	4	BM049537	BM049537 603623478
c	37	19.2	80.0	1390	4	BG169328	BG169328 602321065
	38	19.2	80.0	1798	9	CG756227	CG756227 P051-3-C0
	39	18.8	78.3	595	8	AQ621893	AQ621893 HS_3107_B
c	40	18.8	78.3	597	8	AQ301649	AQ301649 HS_2216_A
c	41	18.8	78.3	826	4	BI091115	BI091115 602854726
c	42	18.8	78.3	963	9	CNS04VQI	AL309411 Tetraodon
c	43	18.8	78.3	1175	4	BI489063	BI489063 603021074
c	44	18.8	78.3	1201	5	BX382355	BX382355 BX382355
c	45	18.8	78.3	1428	2	BF301323	BF301323 602029769

ALIGNMENTS

RESULT 1
AU286121/c
LOCUS AU286121 366 bp mRNA linear EST 04-DEC-2002
DEFINITION AU286121 zinnia cultured mesophyll cell equalized cDNA Zinnia elegans cDNA clone Z906, mRNA sequence.
ACCESSION AU286121
VERSION AU286121.1 GI:24246241
KEYWORDS EST.
SOURCE Zinnia elegans
ORGANISM Zinnia elegans
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids; campanulids; Asterales; Asteraceae; Asteroideae; Heliantheae; Zinnia.
REFERENCE 1 (bases 1 to 366)
AUTHORS Demura,T., Tashiro,G., Horiguchi,G., Kishimoto,N., Kubo,M., Matsuoka,N., Minami,A., Nagata-Hiwatashi,M., Nakamura,K., Okamura,Y., Sassa,N., Suzuki,S., Yazaki,J., Kikuchi,S. and Fukuda,H.
TITLE Visualization by comprehensive microarray analysis of gene expression programs during transdifferentiation of mesophyll cells into xylem cells
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (24), 15794-15799 (2002)
COMMENT Contact: Taku Demura
Morphogenesis Research Group
RIKEN Plant Science Center
1-7-22 Suehirocho, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9605
Fax: 81-45-503-9573
Email: demura@postman.riken.go.jp
This clone was obtained at our laboratory.
Seq primer: M13 forward.
FEATURES Location/Qualifiers
source 1. .366
/organism="Zinnia elegans"
/mol_type="mRNA"
/cultivar="Canary bird"
/db_xref="taxon:34245"
/clone="Z906"
/tissue_type="mesophyll cell"
/clone_lib="zinnia cultured mesophyll cell equalized cDNA"
/note="Vector: pGEM-T easy; cultured in tracheary element differentiation-inductive medium"
ORIGIN

Query Match 86.7%; Score 20.8; DB 1; Length 366;
Best Local Similarity 91.7%; Pred. No. 1.8e+02;

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  Matches   22;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||| |||| |||||||
Db        277 TCGTCGTTTTGCCGTTATGTCGTT 254


RESULT 2
AU287428
LOCUS       AU287428                367 bp    mRNA    linear   EST 04-DEC-2002
DEFINITION  AU287428 zinnia cultured mesophyll cell equalized cDNA Zinnia
            elegans cDNA clone Z1951, mRNA sequence.
ACCESSION   AU287428
VERSION     AU287428.1  GI:24247548
KEYWORDS    EST.
SOURCE      Zinnia elegans
  ORGANISM  Zinnia elegans
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            asterids; campanulids; Asterales; Asteraceae; Asteroideae;
            Heliantheae; Zinnia.
REFERENCE   1  (bases 1 to 367)
  AUTHORS   Demura,T., Tashiro,G., Horiguchi,G., Kishimoto,N., Kubo,M.,
            Matsuoka,N., Minami,A., Nagata-Hiwatashi,M., Nakamura,K.,
            Okamura,Y., Sassa,N., Suzuki,S., Yazaki,J., Kikuchi,S. and
            Fukuda,H.
  TITLE     Visualization by comprehensive microarray analysis of gene
            expression programs during transdifferentiation of mesophyll cells
            into xylem cells
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 99 (24), 15794-15799 (2002)
COMMENT     Contact: Taku Demura
            Morphogenesis Research Group
            RIKEN Plant Science Center
            1-7-22 Suehirocho, Yokohama, Kanagawa 230-0045, Japan
            Tel: 81-45-503-9605
            Fax: 81-45-503-9573
            Email: demura@postman.riken.go.jp
            This clone was obtained at our laboratory.
            Seq primer: M13 forward.
FEATURES             Location/Qualifiers
     source          1. .367
                     /organism="Zinnia elegans"
                     /mol_type="mRNA"
                     /cultivar="Canary bird"
                     /db_xref="taxon:34245"
                     /clone="Z1951"
                     /tissue_type="mesophyll cell"
                     /clone_lib="zinnia cultured mesophyll cell equalized cDNA"
                     /note="Vector: pGEM-T easy; cultured in tracheary element
                     differentiation-inductive medium"
ORIGIN

  Query Match             86.7%;  Score 20.8;  DB 1;  Length 367;
  Best Local Similarity   91.7%;  Pred. No. 1.8e+02;
  Matches   22;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||||| |||| |||||||
Db         90 TCGTCGTTTTGCCGTTATGTCGTT 113


RESULT 3
BF139348
LOCUS       BF139348                1084 bp    mRNA    linear   EST 24-OCT-2000
DEFINITION  601785206F1 NCI_CGAP_Lu30 Mus musculus cDNA clone IMAGE:4013304 5',
            mRNA sequence.
ACCESSION   BF139348
VERSION     BF139348.1  GI:10978388
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 1084)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Gilbert Smith, Ph.D.
             cDNA Library Preparation: Life Technologies, Inc.
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by:Incyte Genomics, Inc.
             Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLAM9255  row: k  column: 01
            High quality sequence stop: 604.
FEATURES             Location/Qualifiers
     source          1. .1084
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /strain="CZECH II"
                     /db_xref="taxon:10090"
                     /clone="IMAGE:4013304"
                     /tissue_type="tumor, metastatic to mammary"
                     /lab_host="DH10B"
                     /clone_lib="NCI_CGAP_Lu30"
                     /note="Organ: lung; Vector: pCMV-SPORT6; Site_1: NotI;
                     Site_2: SalI; transgenic model WNT-1, expression driven by
                     MMTV-LTR enhancer; Cloned unidirectionally.  Primer: Oligo
                     dT.   Library constructed by Life Technologies.
                     Investigator providing samples: Gilbert Smith, NIH"
ORIGIN

  Query Match             86.7%;  Score 20.8;  DB 2;  Length 1084;
  Best Local Similarity   91.7%;  Pred. No. 1.8e+02;
  Matches   22;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              |||| |||||||||||||| |||||
Db       1047 TCGTTGTTTTGTCGTTTTCTCGTT 1070


RESULT 4
BI736003/c
LOCUS       BI736003                669 bp    mRNA    linear   EST 20-SEP-2001
DEFINITION  603359133F1 NIH_MGC_94 Mus musculus cDNA clone IMAGE:5366288 5',
            mRNA sequence.
ACCESSION   BI736003
VERSION     BI736003.1  GI:15713016
KEYWORDS    EST.
SOURCE      Mus musculus (house mouse)
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1  (bases 1 to 669)
  AUTHORS   NIH-MGC http://mgc.nci.nih.gov/.
  TITLE     National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL   Unpublished (1999)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: The Cepko Laboratory
             cDNA Library Preparation: Life Technologies, Inc.
             cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
             DNA Sequencing by: Incyte Genomics, Inc.
             Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLAM11932  row: a  column: 09
            High quality sequence stop: 185.
FEATURES             Location/Qualifiers
     source          1. .669
                     /organism="Mus musculus"
                     /mol_type="mRNA"
                     /db_xref="taxon:10090"
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/clone="IMAGE:5366288"
/tissue_type="retina"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_94"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally; oligo-dT primed.
Average insert size 3.3 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."

ORIGIN

Query Match 85.0%; Score 20.4; DB 4; Length 669;
Best Local Similarity 95.5%; Pred. No. 2.7e+02;
Matches 21; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          3 GTCGTTTTGTCGTTTTGTCGTT 24
              |||||||||||||||| ||||||
Db        237 GTCGTTTTGTCGTTTCGTCGTT 216
```

RESULT 5
BF142544/c
LOCUS BF142544 936 bp mRNA linear EST 24-OCT-2000
DEFINITION 601789246F1 NCI_CGAP_Lu30 Mus musculus cDNA clone IMAGE:4020226 5', mRNA sequence.
ACCESSION BF142544
VERSION BF142544.1 GI:10981584
KEYWORDS EST.
SOURCE Mus musculus (house mouse)
ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE 1 (bases 1 to 936)
AUTHORS NIH-MGC http://mgc.nci.nih.gov/.
TITLE National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL Unpublished (1999)
COMMENT Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by:Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9273 row: k column: 11
High quality sequence stop: 608.
FEATURES Location/Qualifiers
source 1. .936
/organism="Mus musculus"
/mol_type="mRNA"
/strain="CZECH II"
/db_xref="taxon:10090"
/clone="IMAGE:4020226"
/tissue_type="tumor, metastatic to mammary"
/lab_host="DH10B"
/clone_lib="NCI_CGAP_Lu30"
/note="Organ: lung; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; transgenic model WNT-1, expression driven by MMTV-LTR enhancer; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies.
Investigator providing samples: Gilbert Smith, NIH"

ORIGIN

Query Match 85.0%; Score 20.4; DB 2; Length 936;
Best Local Similarity 95.5%; Pred. No. 2.7e+02;
Matches 21; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 TCGTCGTTTTGTCGTTTTGTCG 22
              | ||||||||||||||||||||
Db        902 TGGTCGTTTTGTCGTTTTGTCG 881
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RESULT 6
BH543978
LOCUS BH543978 785 bp DNA linear GSS 14-DEC-2001
DEFINITION BOGYN73TF BOGY Brassica oleracea genomic clone BOGYN73, genomic survey sequence.
ACCESSION BH543978
VERSION BH543978.1 GI:17795759
KEYWORDS GSS.
SOURCE Brassica oleracea
ORGANISM Brassica oleracea
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids; eurosids II; Brassicales; Brassicaceae; Brassica.
REFERENCE 1 (bases 1 to 785)
AUTHORS Town,C.D., Van Aken,S., Utterback,T., Koo,H. and Fraser,C.M.
TITLE Whole genome shotgun sequencing of Brassica oleracea
JOURNAL Unpublished (2001)
COMMENT Other_GSSs: BOGYN73TR
Contact: Chris Town
TIGR
9712 Medical Center Drive, Rockville, MD 20850, USA.
Tel: 301-838-3523
Fax: 301-838-0208
Email: cdtown@tigr.org
DNA is from a doubled haploid provided by Tom Osborn.
Seq primer: TF
Class: sheared ends.
FEATURES Location/Qualifiers
source 1. .785
/organism="Brassica oleracea"
/mol_type="genomic DNA"
/strain="TO1000DH3"
/db_xref="taxon:3712"
/clone="BOGYN73"
/clone_lib="BOGY"
/note="Vector: pHOS1; Site_1: BstXI; 2-3 kb sheared genomic DNA inserted into pHOS1 using BstXI linkers"

ORIGIN

Query Match 82.5%; Score 19.8; DB 8; Length 785;
Best Local Similarity 91.3%; Pred. No. 4.7e+02;
Matches 21; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy          1 TCGTCGTTTTGTCGTTTTGTCGT 23
              |||||||||  ||||||||||||
Db        414 TCGTCGTTTGATCGTTTTGTCGT 436
```

RESULT 7
AZ183817
LOCUS AZ183817 850 bp DNA linear GSS 30-AUG-2000
DEFINITION SP_1002_A1_B08_SP6 Strongylocentrotus purpuratus, purple sea urchin, sperm genomic BAC library Strongylocentrotus purpuratus genomic clone Plate=1002 Col=15 Row=C, genomic survey sequence.
ACCESSION AZ183817
VERSION AZ183817.1 GI:8356192
KEYWORDS GSS.
SOURCE Strongylocentrotus purpuratus
ORGANISM Strongylocentrotus purpuratus
Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa; Echinoidea; Euechinoidea; Echinacea; Echinoida; Strongylocentrotidae; Strongylocentrotus.
REFERENCE 1 (bases 1 to 850)
AUTHORS Cameron,R.A., Mahairas,G., Rast,J.P., Martinez,P., Biondi,T.R., Swartzell,S., Wallace,J.C., Poustka,A.J., Livingston,B.T., Wray,G.A., Ettensohn,C.A., Lehrach,H., Britten,R.J, Davidson,E.H. and Hood,L.
TITLE A sea urchin genome project: Sequence scan, virtual map, and additional resources
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 97 (17), 9514-9518 (2000)
MEDLINE 20402566
PUBMED 10920195
COMMENT Contact: Cameron, RA, Davidson, EH, Hood, L

```
            Division of Biology 156-29
            California Institute of Technology
            Pasadena California 91125, USA
            Tel: (626) 395-8421
            Fax: (626) 793-3047
            Email: acameron@caltech.edu
            Plate: 1002  row: C  column: 15
            Seq primer: SP6
            Class: BAC ends
            High quality sequence stop: 850.
FEATURES              Location/Qualifiers
     source           1. .850
                      /organism="Strongylocentrotus purpuratus"
                      /mol_type="genomic DNA"
                      /db_xref="taxon:7668"
                      /clone="Plate=1002 Col=15 Row=C"
                      /clone_lib="Strongylocentrotus purpuratus, purple sea
                      urchin, sperm genomic BAC library"
                      /note="Organ: sperm; Vector: BACe3.6; BAC Clones in E-Coli
                      DH10B"
ORIGIN

  Query Match             82.5%;  Score 19.8;  DB 8;  Length 850;
  Best Local Similarity   91.3%;  Pred. No. 4.7e+02;
  Matches   21;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGT 23
              ||||||||| |||||||||| ||
Db        385 TCGTCGTTTCGTCGTTTTGTTGT 407


RESULT 8
AG337367
LOCUS       AG337367                916 bp    DNA     linear   GSS 02-JUN-2004
DEFINITION  Mus musculus molossinus DNA, clone:MSMg01-129F06.TJ, genomic survey
            sequence.
ACCESSION   AG337367
VERSION     AG337367.1  GI:47910677
KEYWORDS    GSS.
SOURCE      Mus musculus molossinus
  ORGANISM  Mus musculus molossinus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1
  AUTHORS   Hattori,M., Toyoda,A., Noguchi,H., Kojima,T. and Sakaki,Y.
  TITLE     BAC end Sequences of Library MSMg01
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 916)
  AUTHORS   Hattori,M., Toyoda,A., Noguchi,H., Kojima,T. and Sakaki,Y.
  TITLE     Direct Submission
  JOURNAL   Submitted (17-NOV-2003) Masahira Hattori, The Institute of Physical
            and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
            1-7-22 Suehiro-chou,Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
            (E-mail:hattori@gsc.riken.jp, URL:http://hgp.gsc.riken.go.jp/,
            Tel:81-45-503-9111, Fax:81-45-503-9170)
COMMENT     Clones are derived from the mouse BAC library MSMg01. For BAC
            library availability, please contact Kuniya Abe (abe@rtc.riken.jp).
            Tsukuba Institude, Bio Resource Center,
            The Institute of Physical and Chemical Research (RIKEN) 3-1-1
            Koyadai, Tsukuba, 305-0074 Japan
            phone: 81-298-36-9189, fax: 81-298-36-9199
            e-mail: abe@rtc.riken.jp
            PRIMERS
            Sequencing : TJ
            LIBRARY
            Vector     : pBACe3.6
            R.Site 1   : EcoRI
            R.Site 2   : EcoRI.
FEATURES              Location/Qualifiers
     source           1. .916
                      /organism="Mus musculus molossinus"
                      /mol_type="genomic DNA"
                      /sub_species="molossinus"
                      /db_xref="taxon:57486"
                      /clone="MSMg01-129F06.TJ"
                      /sex="male"
                      /tissue_type="mixture of kidney and spleen"
                      /clone_lib="MSMg01 Mouse Male BAC Library"
ORIGIN

  Query Match             82.5%;  Score 19.8;  DB 9;  Length 916;
  Best Local Similarity   91.3%;  Pred. No. 4.7e+02;
  Matches   21;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGT 23
              ||||||| ||||| ||||||||||
Db        311 TCGTCGGTTTGTTGTTTTGTCGT 333


RESULT 9
AZ199737
LOCUS       AZ199737                613 bp    DNA     linear   GSS 31-AUG-2000
DEFINITION  SP_1040_A2_C02_T7A Strongylocentrotus purpuratus, purple sea
            urchin, sperm genomic BAC library Strongylocentrotus purpuratus
            genomic clone Plate=1040 Col=4 Row=E, genomic survey sequence.
ACCESSION   AZ199737
VERSION     AZ199737.1  GI:8394637
KEYWORDS    GSS.
SOURCE      Strongylocentrotus purpuratus
  ORGANISM  Strongylocentrotus purpuratus
            Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
            Echinoidea; Euechinoidea; Echinacea; Echinoida;
            Strongylocentrotidae; Strongylocentrotus.
REFERENCE   1  (bases 1 to 613)
  AUTHORS   Cameron,R.A., Mahairas,G., Rast,J.P., Martinez,P., Biondi,T.R.,
            Swartzell,S., Wallace,J.C., Poustka,A.J., Livingston,B.T.,
            Wray,G.A., Ettensohn,C.A., Lehrach,H., Britten,R.J, Davidson,E.H.
            and Hood,L.
  TITLE     A sea urchin genome project: Sequence scan, virtual map, and
            additional resources
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 97 (17), 9514-9518 (2000)
  MEDLINE   20402566
   PUBMED   10920195
COMMENT     Contact: Cameron, RA, Davidson, EH, Hood, L
            Division of Biology 156-29
            California Institute of Technology
            Pasadena California 91125, USA
            Tel: (626) 395-8421
            Fax: (626) 793-3047
            Email: acameron@caltech.edu
            Plate: 1040  row: E  column: 4
            Seq primer: T7
            Class: BAC ends
            High quality sequence stop: 613.
FEATURES              Location/Qualifiers
     source           1. .613
                      /organism="Strongylocentrotus purpuratus"
                      /mol_type="genomic DNA"
                      /db_xref="taxon:7668"
                      /clone="Plate=1040 Col=4 Row=E"
                      /clone_lib="Strongylocentrotus purpuratus, purple sea
                      urchin, sperm genomic BAC library"
                      /note="Organ: sperm; Vector: BACe3.6; BAC Clones in E-Coli
                      DH10B"
ORIGIN

  Query Match             80.8%;  Score 19.4;  DB 8;  Length 613;
  Best Local Similarity   95.2%;  Pred. No. 6.9e+02;
  Matches   20;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          4 TCGTTTTGTCGTTTTGTCGTT 24
              || ||||||||||||||||||
Db        588 TCTTTTTGTCGTTTTGTCGTT 608


RESULT 10
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```
BU475840/c
LOCUS       BU475840                 705 bp    mRNA    linear   EST 30-NOV-2002
DEFINITION  603469578F1 CSEQRBN22 Gallus gallus cDNA clone ChEST343120 5', mRNA
            sequence.
ACCESSION   BU475840
VERSION     BU475840.1  GI:25969417
KEYWORDS    EST.
SOURCE      Gallus gallus (chicken)
  ORGANISM  Gallus gallus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
            Phasianinae; Gallus.
REFERENCE   1  (bases 1 to 705)
  AUTHORS   Boardman,P.E., Sanz-Ezquerro,J., Overton,I.M., Burt,D.W., Bosch,E.,
            Fong,W.T., Tickle,C., Brown,W.R.A., Wilson,S.A. and Hubbard,S.J.
  TITLE     A Comprehensive Collection of Chicken cDNAs
  JOURNAL   Curr. Biol. 12 (22), 1965-1969 (2002)
  MEDLINE   22335534
   PUBMED   12445392
COMMENT     Contact: Simon Hubbard
            Department of Biomolecular Sciences
            University of Manchester Institute of Science and Technology
            (UMIST)
            PO Box 88, Manchester, M60 1QD, UK
            Tel: 01612008930
            Fax: 01612360409
            Email: Simon.Hubbard@umist.ac.uk.
FEATURES             Location/Qualifiers
     source          1. .705
                     /organism="Gallus gallus"
                     /mol_type="mRNA"
                     /strain="Layer and broiler"
                     /db_xref="taxon:9031"
                     /clone="ChEST343120"
                     /sex="Male and female"
                     /tissue_type="Chondrocytes isolated from growth plate
                     cartilage"
                     /dev_stage="adult"
                     /lab_host="DH10B"
                     /clone_lib="CSEQRBN22"
                     /note="Vector: pBluescript II KS(+); Site_1: EcoRI;
                     Site_2: Not1; This normalized library was constructed from
                     1 million independent clones. cDNA synthesis was initiated
                     using an oligo(dT) primer, using methylated C in the first
                     strand synthesis reaction. Following this first strand
                     reaction, double-stranded cDNA was blunted, ligated to
                     NotI adapters, digested with EcoRI, size-selected, and
                     cloned into the NotI and EcoRI compatible sites of a
                     custom modified MCS of the pBluescript (KS+) vector. The
                     library was normalized in 2 rounds using conditions
                     adapted from Soares et al., PNAS (1994) 91: 9228-9232 and
                     Bonaldo et al., Genome Research 6 (1996): 791, except that
                     a significantly longer reannealing hybridization was
                     used."
ORIGIN

  Query Match             80.8%;  Score 19.4;  DB 5;  Length 705;
  Best Local Similarity   95.2%;  Pred. No. 6.9e+02;
  Matches   20;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          4 TCGTTTTGTCGTTTTGTCGTT 24
              ||| ||||||||||||||||||
Db        596 TCGGTTTGTCGTTTTGTCGTT 576


RESULT 11
BI451665
LOCUS       BI451665                 317 bp    mRNA    linear   EST 21-AUG-2001
DEFINITION  ro57f03.y4 Heterodera glycines J2 pAMP1 v8 Chiapelli McCarter
            Heterodera glycines cDNA 5' similar to contains element XTR
            repetitive element ;, mRNA sequence.
ACCESSION   BI451665
VERSION     BI451665.1  GI:15276372
KEYWORDS    EST.
SOURCE      Heterodera glycines
  ORGANISM  Heterodera glycines
            Eukaryota; Metazoa; Nematoda; Chromadorea; Tylenchida; Tylenchina;
            Tylenchoidea; Heteroderidae; Heteroderinae; Heterodera.
REFERENCE   1  (bases 1 to 317)
  AUTHORS   McCarter,J., Clifton,S., Chiapelli,B., Pape,D., Martin,J.,
            Wylie,T., Dante,M., Marra,M., Hillier,L., Kucaba,T., Theising,B.,
            Bowers,Y., Gibbons,M., Ritter,E., Bennett,J., Franklin,C.,
            Tsagareishvili,R., Ronko,I., Kennedy,S., Maguire,L., Beck,C.,
            Underwood,K., Steptoe,M., Allen,M., Person,B., Swaller,T.,
            Harvey,N., Schurk,R., Kohn,S., Shin,T., Jackson,Y., Cardenas,M.,
            McCann,R., Waterston,R. and Wilson,R.
  TITLE     The Washington Univ. Nematode EST Project, 1999
  JOURNAL   Unpublished (1999)
COMMENT     Contact: McCarter JP
            The Washington Univ. Nematode EST Project, 1999
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            The library was constructed by Brandi Chiapelli and Dr. James
            McCarter (bchiapel@watson.wustl.edu & jmccarte@watson.wustl.edu) at
            Washington University, St. Louis. DNA Sequencing by: Washington
            University Genome Sequencing Center St. Louis.
            High quality sequence stop: 306.
FEATURES             Location/Qualifiers
     source          1. .317
                     /organism="Heterodera glycines"
                     /mol_type="mRNA"
                     /db_xref="taxon:51029"
                     /dev_stage="enriched for 2nd stage juveniles"
                     /lab_host="DH10B"
                     /clone_lib="Heterodera glycines J2 pAMP1 v8 Chiapelli
                     McCarter"
                     /note="Vector: pAMP1 (Gibco); Site_1: NotI; Site_2: SalI;
                     The library was constructed by Brandi Chiapelli and Dr.
                     James McCarter at Washington University, St. Louis. The
                     cDNA was made by using Dynabead oligo-dT priming (Dynal).
                     PCR based library using a modified protocol from the SMART
                     PCR cDNA Synthesis Kit from Clontech. Directionally cloned
                     into the UDG sites of pAMP1. Nematodes are the OP25
                     strain. Frozen J2 nematodes were provided by Dr. Rick
                     Davis of North Carolina State University"
ORIGIN

  Query Match             80.0%;  Score 19.2;  DB 4;  Length 317;
  Best Local Similarity   87.5%;  Pred. No. 8.2e+02;
  Matches   21;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              |||||| |||||| |||| |||||
Db        132 TCGTCGCTTTGTCTTTTTTCGTT 155


RESULT 12
BI748907
LOCUS       BI748907                 322 bp    mRNA    linear   EST 25-SEP-2001
DEFINITION  ro83f02.y1 Heterodera glycines J2 pAMP1 v8 Chiapelli McCarter
            Heterodera glycines cDNA 5', mRNA sequence.
ACCESSION   BI748907
VERSION     BI748907.1  GI:15770709
KEYWORDS    EST.
SOURCE      Heterodera glycines
  ORGANISM  Heterodera glycines
            Eukaryota; Metazoa; Nematoda; Chromadorea; Tylenchida; Tylenchina;
            Tylenchoidea; Heteroderidae; Heteroderinae; Heterodera.
REFERENCE   1  (bases 1 to 322)
  AUTHORS   McCarter,J., Clifton,S., Chiapelli,B., Pape,D., Martin,J.,
            Wylie,T., Dante,M., Marra,M., Hillier,L., Kucaba,T., Theising,B.,
            Bowers,Y., Gibbons,M., Ritter,E., Bennett,J., Franklin,C.,
            Tsagareishvili,R., Ronko,I., Kennedy,S., Maguire,L., Beck,C.,
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            Underwood,K., Steptoe,M., Allen,M., Person,B., Swaller,T.,
            Harvey,N., Schurk,R., Kohn,S., Shin,T., Jackson,Y., Cardenas,M.,
            McCann,R., Waterston,R. and Wilson,R.
  TITLE     The Washington Univ. Nematode EST Project, 1999
  JOURNAL   Unpublished (1999)
COMMENT     Contact: McCarter JP
            The Washington Univ. Nematode EST Project, 1999
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            The library was constructed by Brandi Chiapelli and Dr. James
            McCarter (bchiapel@watson.wustl.edu & jmccarte@watson.wustl.edu) at
            Washington University, St. Louis. DNA Sequencing by: Washington
            University Genome Sequencing Center St. Louis.
            High quality sequence stop: 310.
FEATURES             Location/Qualifiers
     source          1. .322
                     /organism="Heterodera glycines"
                     /mol_type="mRNA"
                     /db_xref="taxon:51029"
                     /dev_stage="enriched for 2nd stage juveniles"
                     /lab_host="DH10B"
                     /clone_lib="Heterodera glycines J2 pAMP1 v8 Chiapelli
                     McCarter"
                     /note="Vector: pAMP1 (Gibco); Site_1: NotI; Site_2: SalI;
                     The library was constructed by Brandi Chiapelli and Dr.
                     James McCarter at Washington University, St. Louis. The
                     cDNA was made by using Dynabead oligo-dT priming (Dynal).
                     PCR based library using a modified protocol from the SMART
                     PCR cDNA Synthesis Kit from Clontech. Directionally cloned
                     into the UDG sites of pAMP1. Nematodes are the OP25
                     strain. Frozen J2 nematodes were provided by Dr. Rick
                     Davis of North Carolina State University"
ORIGIN

  Query Match             80.0%;  Score 19.2;  DB 4;  Length 322;
  Best Local Similarity   87.5%;  Pred. No. 8.2e+02;
  Matches   21;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              |||||| |||||| |||| |||||
Db        139 TCGTCGCTTTGTCTTTTTTTCGTT 162


RESULT 13
CO902262
LOCUS       CO902262                330 bp    mRNA    linear   EST 16-AUG-2004
DEFINITION  Mdfrt3057k02.y1 Mdfrt Malus x domestica cDNA clone Mdfrt3057k02 5',
            mRNA sequence.
ACCESSION   CO902262
VERSION     CO902262.1  GI:51292565
KEYWORDS    EST.
SOURCE      Malus x domestica (cultivated apple)
  ORGANISM  Malus x domestica
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids I; Rosales; Rosaceae; Maloideae; Malus.
REFERENCE   1  (bases 1 to 330)
  AUTHORS   Korban,S., Vodkin,L., Liu,L., Gasic,K., Gonzales,O., Hernandez,A.,
            Aldwinckle,H., Malnoy,M., Carroll,N., Goldsbrough,P., Orvis,K.,
            Clifton,S., Pape,D., Marra,M., Hillier,L., Martin,J., Wylie,T.,
            Dante,M., Theising,B., Bowers,Y., Gibbons,M., Ritter,E., Ronko,I.,
            Tsagareishvili,R., Kennedy,S., Waterston,R. and Wilson,R.
  TITLE     Apple Functional Genomics grant - NSF 0321702
  JOURNAL   Unpublished (2004)
COMMENT     Contact: Schuyler S. Korban
            Apple Functional Genomics grant - NSF 0321702
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            Library materials provided by: Schuyler S. Korban Library
            constructed by: K. Gasic Library sequenced by: Washington
            University Genome Sequencing Center
            WashU EST name: aaj94f01.y1
            Seq primer: -40UP from Gibco.
FEATURES             Location/Qualifiers
     source          1. .330
                     /organism="Malus x domestica"
                     /mol_type="mRNA"
                     /db_xref="taxon:3750"
                     /clone="Mdfrt3057k02"
                     /lab_host="DH10B ampicillin resistant"
                     /clone_lib="Mdfrt"
                     /note="Vector: pBluescript II SK (+); Site_1: NotI;
                     Site_2: EcoR1I; Total RNA was extracted separately from
                     each stage (young fruitlet(<1cm), young fruitlet (1 cm
                     dia.), young fruitlet (12cm dia.),  maturing fruit I,
                     maturing fruit II, mature fruit], using the 'pine tree'
                     method. Poly(A)+mRNA was isolated twice from total RNA
                     from each stage using the Oligotex Direct mRNA kit
                     (Qiagen). mRNA was reverse transcribed into double
                     stranded cDNA using a modified oligo18(dT) primer with an
                     identifying tag sequence (see table below). cDNA's from
                     different stages were pooled in equal amounts before
                     adaptor ligation. Tag identification when sequencing from
                     5' end: Stage 1 (young fruitlet) insert 18(A)TCGTG; Stage
                     2 (young fruitlet 1cm dia) insert 18(A)TGCTG; Stage 3
                     (young fruitlet 12cm dia) insert 18(A)TCGGT; Stage 4
                     (maturing fruit I) insert 18(A)TGCGA; Stage 5 (maturing
                     fruit II) insert 18(A)TCGGA; Stage 6 (mature fruit) insert
                     18(A)TGCGT; Tag identification when sequencing from 3'
                     end: Stage 1 (young fruitlet) CACGA18(T) insert; Stage 2
                     (young fruitlet 1cm dia) CAGCA18(T) insert; Stage 3 (young
                     fruitlet 12cm dia) ACCGA18(T) insert; Stage 4 (maturing
                     fruit I) TCGCA18(T) insert; Stage 5 (maturing fruit II)
                     TCCGA18(T) insert; Stage 6 (mature fruit) ACGCA18(T)
                     insert. Double stranded cDNAs were size selected (more
                     than 450 bp), adaptored with EcoRI adapters at both ends
                     and then digested with NotI. The cDNAs were then
                     directionally cloned into EcoR1-NotI digested pBS II SK(+)
                     phagemid vector(Stratagene). Identification of adaptors
                     and tags in 5'-end sequenced clones:
                     <Vector>. . .TAAGCTT<End Vector><Start
                     EcoR1_adaptor>GATATCGAATTCCATTGTGTTGGG <End
                     EcoR1_adaptor><Start Insert>. . . .AAAAAAAAAAAAAAAAAA<End
                     Insert> <Start Tag>TGCGA<End Tag><Start
                     NotI_site/Vector>GCGGCCGCCACCGCGG. . . The total number of
                     white colony forming units (cfu) in the primary library
                     before amplification was 2.1x10^6 cfu (colony forming
                     units). The background of empty clones was less than 1%.
                     Inserts ranged from 0.5kb to 4 kb, as determined by PCR.
                     Purified plasmid DNA from the primary library was
                     converted to single-stranded circles and used as a
                     template for PCR amplification using the T7 and T3 priming
                     sites flanking the cloned cDNA inserts. The purified PCR
                     products, representing the entire cloned cDNA population,
                     were used as a driver for normalization. Hybridization
                     between the single-stranded library and the PCR products
                     was carried out for 44 hours at 30C. Unhybridized
                     single-stranded DNA circles were separated from hybridized
                     DNA rendered partially double-stranded and electroporated
                     into DH10B cells to generate the normalized library. The
                     total number of clones with insert was 5.6x10^6 cfu.
                     Background of empty clones was less than 1%."
ORIGIN

  Query Match             80.0%;  Score 19.2;  DB 7;  Length 330;
  Best Local Similarity   87.5%;  Pred. No. 8.2e+02;
  Matches   21;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||||||| ||||||  ||||||
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Db         88 TCGTCGTTTCGTCGTTCCGTCGTT 111


RESULT 14
BI396890
LOCUS       BI396890                335 bp    mRNA    linear   EST 08-AUG-2001
DEFINITION  ro63b08.y3 Heterodera glycines J2 pAMP1 v8 Chiapelli McCarter
            Heterodera glycines cDNA 5', mRNA sequence.
ACCESSION   BI396890
VERSION     BI396890.1  GI:15127170
KEYWORDS    EST.
SOURCE      Heterodera glycines
  ORGANISM  Heterodera glycines
            Eukaryota; Metazoa; Nematoda; Chromadorea; Tylenchida; Tylenchina;
            Tylenchoidea; Heteroderidae; Heteroderinae; Heterodera.
REFERENCE   1  (bases 1 to 335)
  AUTHORS   McCarter,J., Clifton,S., Chiapelli,B., Pape,D., Martin,J.,
            Wylie,T., Dante,M., Marra,M., Hillier,L., Kucaba,T., Theising,B.,
            Bowers,Y., Gibbons,M., Ritter,E., Bennett,J., Franklin,C.,
            Tsagareishvili,R., Ronko,I., Kennedy,S., Maguire,L., Beck,C.,
            Underwood,K., Steptoe,M., Allen,M., Person,B., Swaller,T.,
            Harvey,N., Schurk,R., Kohn,S., Shin,T., Jackson,Y., Cardenas,M.,
            McCann,R., Waterston,R. and Wilson,R.
  TITLE     The Washington Univ. Nematode EST Project, 1999
  JOURNAL   Unpublished (1999)
COMMENT     Contact: McCarter JP
            The Washington Univ. Nematode EST Project, 1999
            Washington University School of Medicine
            4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
            Tel: 314 286 1800
            Fax: 314 286 1810
            Email: est@watson.wustl.edu
            The library was constructed by Brandi Chiapelli and Dr. James
            McCarter (bchiapel@watson.wustl.edu & jmccarte@watson.wustl.edu) at
            Washington University, St. Louis. DNA Sequencing by: Washington
            University Genome Sequencing Center St. Louis.
            Putative full length read
            The vector to vector length is 336.
FEATURES             Location/Qualifiers
     source          1. .335
                     /organism="Heterodera glycines"
                     /mol_type="mRNA"
                     /db_xref="taxon:51029"
                     /dev_stage="enriched for 2nd stage juveniles"
                     /lab_host="DH10B"
                     /clone_lib="Heterodera glycines J2 pAMP1 v8 Chiapelli
                     McCarter"
                     /note="Vector: pAMP1 (Gibco); Site_1: NotI; Site_2: SalI;
                     The library was constructed by Brandi Chiapelli and Dr.
                     James McCarter at Washington University, St. Louis. The
                     cDNA was made by using Dynabead oligo-dT priming (Dynal).
                     PCR based library using a modified protocol from the SMART
                     PCR cDNA Synthesis Kit from Clontech. Directionally cloned
                     into the UDG sites of pAMP1. Nematodes are the OP25
                     strain. Frozen J2 nematodes were provided by Dr. Rick
                     Davis of North Carolina State University"
ORIGIN

  Query Match             80.0%;  Score 19.2;  DB 4;  Length 335;
  Best Local Similarity   87.5%;  Pred. No. 8.2e+02;
  Matches   21;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              |||||| |||||| |||| |||||
Db        135 TCGTCGCTTTGTCTTTTTTTCGTT 158


RESULT 15
CC084807/c
LOCUS       CC084807                437 bp    DNA     linear   GSS 16-APR-2003
DEFINITION  CSU-K33r.16J24.SP6 CSU-K33r Aedes aegypti genomic clone
            CSU-K33r.16J24, genomic survey sequence.
ACCESSION   CC084807
VERSION     CC084807.1  GI:29936262
KEYWORDS    GSS.
SOURCE      Aedes aegypti (yellow fever mosquito)
  ORGANISM  Aedes aegypti
            Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
            Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Aedes;
            Stegomyia.
REFERENCE   1  (bases 1 to 437)
  AUTHORS   Loftus,B., Shetty,J., Severson,D., Brown,S. and Knudson,D.
  TITLE     End sequencing of Aedes aegypti BACs
  JOURNAL   Unpublished (2003)
COMMENT     Other_GSSs: CSU-K33r.16J24.T7
            Contact: Brendan Loftus
            Department of Eukaryotic Genomics
            TIGR
            9712 Medical Center Drive, Rockville, MD 20850, USA
            Tel: 301-838-3543
            Fax: 301-838-0208
            Email: enta@tigr.org
            Library was provided by Susan Brown and Dennis Knudson at Colorado
            State University.
            Seq primer: SP6
            Class: BAC ends.
FEATURES             Location/Qualifiers
     source          1. .437
                     /organism="Aedes aegypti"
                     /mol_type="genomic DNA"
                     /strain="Rexville"
                     /db_xref="taxon:7159"
                     /clone="CSU-K33r.16J24"
                     /clone_lib="CSU-K33r"
                     /note="Vector: pBeloBAC11; Site_1: HindIII"
ORIGIN

  Query Match             80.0%;  Score 19.2;  DB 8;  Length 437;
  Best Local Similarity   87.5%;  Pred. No. 8.2e+02;
  Matches   21;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 TCGTCGTTTTGTCGTTTTGTCGTT 24
              ||||| |||| ||| |||||||||
Db         86 TCGTCTTTTTCTCGGTTTGTCGTT 63


Search completed: August  5, 2005, 06:13:21
Job time : 8402 secs
```